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# NBS SPECIAL PUBLICATION

## 260-111

STANDARD REFERENCE MATERIALS:  
COMPILATION OF ELEMENTAL CON-  
CENTRATION DATA FOR NBS  
CLINICAL, BIOLOGICAL, GEOLOGIC-  
AL, AND ENVIRONMENTAL STANDARD  
REFERENCE MATERIALS.

E. S. GLADNEY, B. T. O'MALLEY,  
I. ROELANDTS, AND T. E. GILLS.





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U.S. DEPARTMENT OF COMMERCE/National Bureau of Standards

*Standard Reference Materials:*  
**Compilation of Elemental Concentration  
Data for NBS Clinical, Biological,  
Geological, and Environmental  
Standard Reference Materials**

**E. S. Gladney, B. T. O'Malley, I. Roelandts, and T. E. Gills**



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*Standard Reference Materials:*

**Compilation of Elemental Concentration  
Data for NBS Clinical, Biological,  
Geological, and Environmental  
Standard Reference Materials**

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## PREFACE

Standard Reference Materials (SRMs) as defined by the National Bureau of Standards are "well-characterized materials, produced in quantity, that calibrate a measurement system to assure compatibility of measurement in the Nation." SRMs are widely used as primary standards in many diverse fields of science, industry and technology, both within the United States and throughout the world. For many of the Nation's scientists and technologists it is of more than passing interest to know the measurements obtained and methods used by the analytical community when analyzing SRMs. An NBS series of papers, of which this publication is a member, is called the "NBS Special Publication - 260 Series" is reserved for this purpose.

This 260 Series is dedicated to the dissemination of elemental concentration data for NBS clinical, biological, geological, and environmental SRMs. More information will be found in this 260 than is generally found in NBS Certificates of Analysis. This 260 enables the user of these SRMs to assess the validity of data not available in the certificate of analysis. We hope that this 260 will provide sufficient additional information so that new application of these SRMs may be sought and found.

Inquires concerning the technical content of this compilation should be directed to the authors. Other questions concerned with the availability, delivery, or price of specific SRMs should be addressed to:

Office of Standard Reference Materials  
National Bureau of Standards  
Gaithersburg, MD 20899

Stanley D. Rasberry, Chief  
Office of Standard Reference Materials

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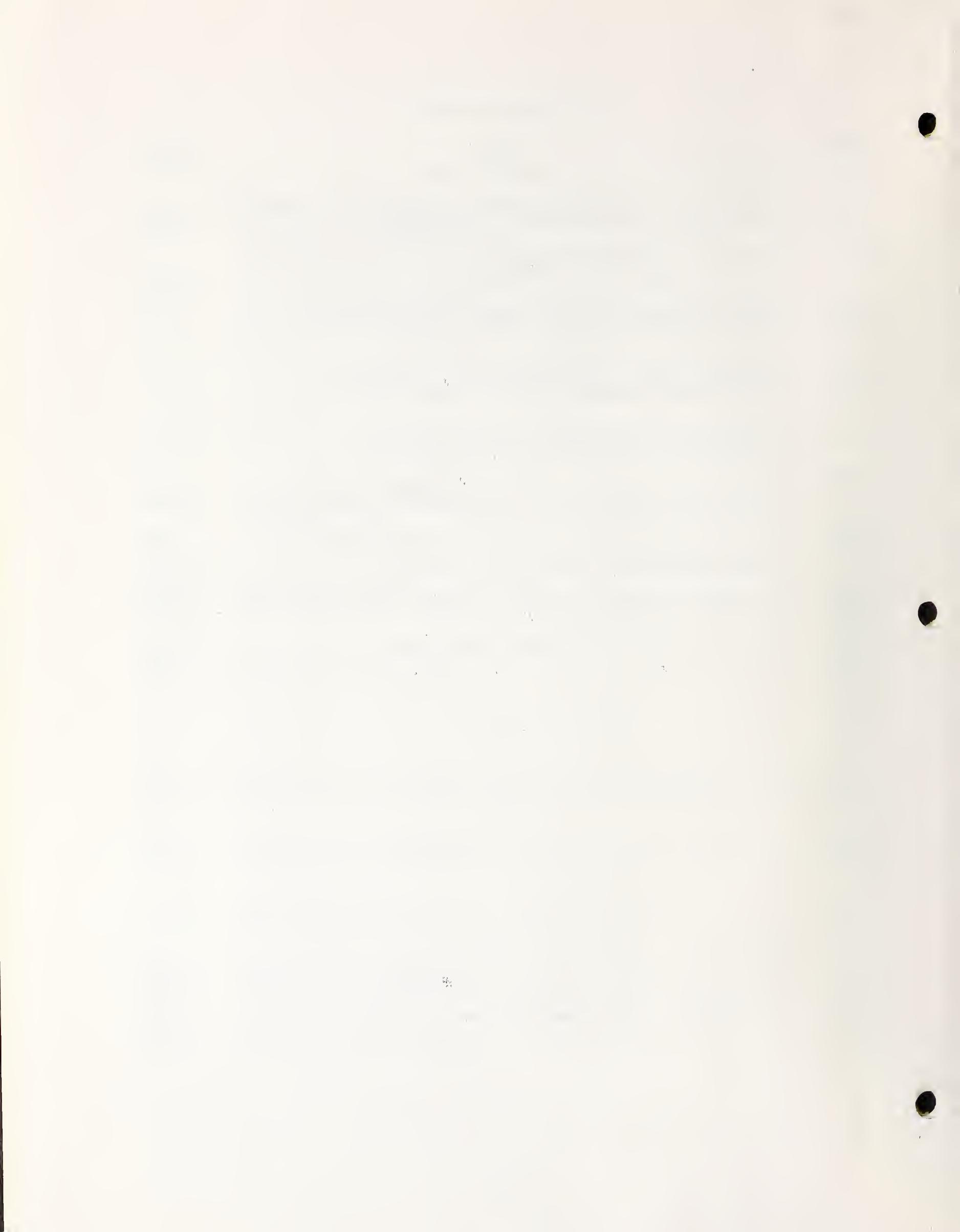
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Compilation of Elemental Concentration Data for NBS Clinical, Biological, Geological, and Environmental  
Standard Reference Materials

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Concentration data on as many as 92 constituents in 166 NBS Standard Reference Materials have been collected from over 1500 journal articles and technical reports. These data are summarized in consensus (mean) values with uncertainties expressed as  $\pm$  one standard deviation and compared with all available certification data from NBS. Data are presented on the analytical procedures employed and all raw data are given in the tables. This compilation is a successor to NBS Special Publication 260-88.

Key words: Analytical methods, biological, certified, clinical, compilation, consensus values, environmental, geological, informational values, literature values, mean values, Standard Reference Materials, SRM.

DISCLAIMER

Certain commercial equipment, instruments, or materials are identified in this report to adequately specify the procedure used for data compilation. Such identification does not imply recommendation or endorsement by the National Bureau of Standards or the Department of Energy, nor does it imply that the materials or equipment identified are necessarily the best available for the purpose.

1. Introduction

This compilation is a revised, updated, and expanded version of the 1982 edition published as NBS Special Publication 260-88 in 1984 (1). It is produced in a "living manual" format with the intent that individual tables will be revised whenever sufficient new data have appeared in the literature. These revisions will be provided to all known holders of the manual.

The National Bureau of Standards (NBS) has produced nearly 200 Standard Reference Materials

(SRM's) for use in clinical, biological, geological, and environmental analytical chemistry. The basic goal of the SRM program is to provide homogeneous and stable materials of a variety of natural matrices, for use in technique development and in analytical quality assurance. The function of SRM's in the latter role has been well-documented in a series of publications by Taylor (2-5). Standard Reference Materials carry the full legal weight and authority of NBS and the U.S. Department of Commerce, as they have been specifically authorized by federal legislation.

The concentrations of as many as 44 constituents have been determined by NBS at one of two confidence levels in each SRM: certified values and non-certified or informational values. The former is the present best estimate of the true concentration of that constituent and is not expected to deviate from that concentration by more than the stated uncertainty. These certified concentrations are determined at NBS or with cooperating laboratories using either a definitive method, two or more independent methods, or reference methods. These methods and other certification criteria have been carefully defined by Uriano and Gravatt (6). Constituent concentrations that are labeled as non-certified or informational are those that NBS has not measured by a definitive method, a reference method, or two or more independent methods.

A limitation of many of these SRM's has been the restricted number of constituents that NBS can afford to certify in each material. Numerous investigators outside NBS have published concentration data on constituents in these reference materials. Although brief review articles on NBS SRM's occasionally appear in the literature (7,8), we believe that the user should have access to both the summarized "consensus" value or mean concentration value and all the data on which they were based. This philosophy has been the basis of most of our previous compilation efforts (9-18). Because abstracting services do not have a category "standard reference materials" and this label is rarely used in keyword indices published with articles, the widely scattered data in reports, articles, books, and conference proceedings have been collected only with difficulty.

Data compilations also provide a mechanism for quality assurance checks on agency or compiler's "certified" values. Consistent disagreement between the user community and a certifying agency should encourage the material's producer to carefully re-examine his certification measurements on the element(s) that are in dispute.

There has been continuing controversy among compilers concerning the determination and reporting of final compositional information on reference materials. Flanagan (19) has used "recommended", "average", and "magnitude" to characterize his "estimates" for major components and trace elements in United States Geological

Survey materials. Abbey (20,21) has coined the term "usable value" for some of his results and pioneered the "select Laboratories" approach for arriving at overall compositional information. Gladney and Goode (13) elected to report only "mean values" and associated standard deviations without further attempt to assess the varying quality of data determined by different analytical techniques. For the French geostandards (CRPG, ANRT) Roubault, et al. (22) have considered "recommended", "preferred", and "proposed" values depending upon the degree of confidence they felt could be attached to the data. Steele, et al. (23), have reported "recommended" values in the six NIMROC rock samples using some statistical methods. Gladney, et al. (15), chose the term "consensus values" to describe their mean values calculated for USGS rocks after judgemental and statistical eliminations of initial outliers. Lister (24) has examined other "robust" estimators which he believes provide better estimates of true concentrations than mean values. Flanagan (25) has used two-way analysis of variance to produce "best estimates of composition" on three recent USGS reference rock samples. Abbey and Rousseau (26) have debated the merits of "Pragmatism vs Rigour" as approaches to the resolution of "disparate" analytical data on four Canadian Iron-Formation reference samples. Lister (27) has used plotting of "S-distribution curves" in an attempt to more closely examine analytical data included in reference materials compilations. Abbey (28) has also recently examined the use of "robust" estimators and Flanagan (29) has recently reviewed the entire spectrum of approaches to composition determination in reference samples.

Approaches to value judgement of data quality or even the advisability of compiling reference materials data can be debated endlessly. The responsibility for the informed end use of these compiled data, regardless of who performed the compilation, lies with individual investigators. Each should read our methodology carefully and critically so that he may decide for himself its limitations. The values in the tables must not be used uncritically. All data behind our mean "consensus values" are presented in the succeeding table so that anyone may recalculate them to reflect his own experience whenever desired.

## 2. Data Compilation

A listing of the 167 SRM's included in this document is provided in Table I, along with the most recent certification date, the number of data points included in the present compilation, and the relative amount of this data which is new from the previous compilation. All NBS certified and informational values for these SRM's are reported in the individual data tables for ease of comparison. Certified values have uncertainties stated, while informational/uncertified values do not.

The 67 major journals in analytical chemistry, geology, petrology, geochemistry, and environmental science that have been surveyed are shown in Table II. Less comprehensive coverage of books and institutional reports for 1972-1985 has been achieved. More than 1500 different references containing original data on NBS materials have been located. All tables containing summarized data are numbered xxxx-1 while all individual data follow in the table numbered xxxx-2, where xxxx is the NBS SRM number of the material. These latter tables contain the individual data, uncertainties (where provided), references, and the analytical techniques used.

All individual data located were assembled using a VAX 11/730 minicomputer with a VAX-VMS (version 4.2) operating system, an RA-80 121 Mb fixed-media disc drive, three RL-02 10 Mb cartridge disc drives, the Common Data Dictionary (version 3.2) and VAX Datatrive (version 3.2) software packages (all are registered trademarks of the Digital Equipment Corporation, Manard, Massachusetts). Datatrive is an interactive data storage and maintenance software system that provides facilities for selective data retrieval, updating, sorting, formatting, and report generation with a minimum of programming overhead. Data were hand-entered into the system via terminal keyboard from copies of the original references. Details of our Datatrive based data management system are published elsewhere (30).

Upon closing of the database for calculation and publication of the compiled data, all individual records were inspected for typographical errors in material name, element name, units, analytical methods, etc. Those identified were corrected using simple user-generated Datatrive procedures. Data were then sorted by material,

then constituent, and finally units. This collection was inspected (via another user-generated Datatrive procedure) to identify constituents within a given material that had two or more unit types for the same element. These were then corrected to the same set of units for each conflicting set found using another Datatrive procedure. Data were resorted by material, constituent, and in ascending order of concentration within each constituent (this can be accomplished in a single operation within Datatrive). This year, to conserve space, we have chosen to eliminate all reports of limit values (less-than and greater-than) from materials and elements where the data justify confidence in our ability to report a real consensus value. Some subjective criteria, as described by Abbey (21) were used to eliminate data on either end of the reported concentration spectrum that we judged to be clearly beyond the limits of acceptability. Following these eliminations (usually less than 1% of the total data), an initial mean and standard deviation were computed using all remaining data for a given constituent in each SRM. All data points now outside  $\pm$  two standard deviations from the initial mean were dropped and a revised mean and standard deviation recomputed. These final means and associated standard deviations are reported as our consensus values in Tables 1A-1 to 4355-1 for up to 92 constituents. The number of literature values used to calculate each final value is indicated in the tables. Where sufficient data exist, the median was also determined using all data other than "less-than" values.

The compiled data were again resorted by material, constituent, and groups of analytical methods. An iterative mean and standard deviation (using  $\pm$  2s for first round eliminations) were calculated for groups of analytical methods which had sufficient data (i.e., instrumental thermal, instrumental epithermal, radiochemical thermal, radiochemical epithermal, general neutron activation, and delayed neutron methods were all combined into neutron activation; general, wave-length dispersive, and energy dispersive methods into X-ray fluorescence, etc.). These analytical method means and associated standard deviations are also included in the tables.

Mean values in the summary tables (xxxx-1 series) that are based upon less than three data points do not include standard deviations. In a few cases the reported data had such a wide range

as to render the mean value calculation meaningless. Such cases are reported as ranges only (no standard deviation specified). Additionally, there are a few elements where only upper limit data exist, and these are given as only limit values in the tables.

### 3. Discussion

Our consensus values for major and minor elements in some SRM's can be subjected to a test commonly used by geochemists. "Whole material" summations, similar to geochemists "whole rock" summations, can be calculated from elemental data when oxygen data are available, or the elements can be converted to stoichiometric oxides and then summed. The latter approach is inappropriate for coals, oils, biologicals, and non-silicate rocks where many elements are not present in oxide forms. Because we still have not located any reports of oxygen determination in any of the biological SRM's, the "whole material" summation test cannot yet be applied. There are sufficient oxygen data on three coals and two fly ash materials to attempt the "whole material" summation. It is important that all concentration data used are either on a "dry-weight" basis or that the hydrogen or bound and unbound water be included as individual items in constituents summed. For two silicate rock SRM's where insufficient oxygen data exist, major and minor elements have been converted to stoichiometric oxide forms and summed. In all cases, the uncertainties (where known) are propagated onto the final sum using standard statistical techniques. The results of these calculations are shown below in Table III. Summations of 99 - 101 % are considered a good indication that the major and minor element data are reasonably accurate and internally consistent. The material summations for NBS SRM's 278, 688, 1632A, 1633, 1633A, and 1635 meet this quality criteria, although the propagated uncertainty on the coals (1632A and 1635) are much larger than one would prefer. The summation for NBS SRM 1632 is over 2% lower than the previous compilation, due to a drop in the consensus value for oxygen. Since the two oxygen measurements located differ by a factor of 1.5, the uncertainty on this consensus value is quite high. In the future it is hoped that good oxygen data will be available so that this approach can be applied to a larger number of materials.

The growth of the body of SRM data since the last compilation is summarized in Table I. More details about the changing patterns in reference material measurements, their sources, the analytical techniques used, and the constituents measured were recently described by Gladney and Roelandts (31).

The key to analytical method codes (METHOD) is given in Table IV. The key to the COMMENT code is given in Table V. All data reported as oxides in the original references were converted to elemental form using the conversion factors shown in Table VI. The individual data (CONC), their uncertainties when provided (UNCER), analytical technique used (METHOD), and the individual references are given in Tables numbered xxxx-2 for each SRM. These tables were generated with user-written Datatrieve "procedures," the VAX Datatrieve report writing facilities and the DEC Keypad editor. All tables were printed on a Hewlett-Packard LaserJet printer. Data that were reported as "greater-than" values have been omitted entirely, and "less-than" values are shown as "<" under CONC and "L" under COMMENT. As mentioned above, less-than values that no longer offer any useful perspective on elements with well-established values have been dropped from the database to conserve space. The data have been sorted in ascending order based upon material, constituent, and concentration using VAX Datatrieve. All the references (CODE and NUM) have been identified in Reference Appendix. The CODE consists of the last two digits of the year of publication plus the first three letters of the first author's last name. The two digit numerical suffix (NUM) is provided to enable handling of multiple reports by the same first author in the same year. This particular reference coding system was adopted in preference to a sequential numbering system in 1980 to permit rapid searching of the reference database using Datatrieve, and to permit easy random updating of both the reference and concentration databases without the necessity of renumbering the references. Since over 4000 references with data on various NBS, United States Geological Survey (USGS), and Canadian Certified Reference Materials Project (CCRMP) materials are now in our system, these considerations are extremely important.

#### 4. Conclusion

Although we have endeavored to achieve as wide a coverage of the literature as possible, we realize that this compilation is still incomplete. We appreciate the efforts of those investigators who have sent us their data directly, and we continue to request that the users of this compilation call our attention to omissions and errors so that they may be corrected in subsequent editions. Anyone with unpublished results or data published in "technical reports" that may not be widely circulated, on any NBS, USGS, or CCRMP reference materials are urged to send their data to the first author of this compilation and it will be placed in our database with appropriate reference to the source.

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#### CREDIT

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TABLE 1: NATIONAL BUREAU OF STANDARDS BIOLOGICAL, ENVIRONMENTAL, AND GEOLOGICAL STANDARD REFERENCE MATERIALS

| SRM Number | Name                               | Certification Date | # data<br>(1986) | % New<br>(1986) |
|------------|------------------------------------|--------------------|------------------|-----------------|
| 1A         | Argillaceous Limestone             | 1931               | 98               | 19              |
| 1b         | Argillaceous Limestone             | 1966               | 77               | 32              |
| 1c         | Argillaceous Limestone             | 1978               | 37               | 100             |
| 27F        | Iron Ore (Sibley)                  | 1977               | 1                | 100             |
| 56         | Tennessee Phosphate Rock           | 1927               | 1                | 0               |
| 56B        | Phosphate Rock (Tennessee Brown)   | 1947               | 3                | 0               |
| 69A        | Bauxite                            | 1951               | 81               | 44              |
| 69B        | Bauxite (Arkansas)                 | 1979               | 0                | --              |
| 70         | Feldspar                           | 1926               | 24               | 0               |
| 70a        | Feldspar                           | 1981               | 64               | 22              |
| 76         | Burnt Refractory                   | 1955               | 10               | 0               |
| 76A        | Burnt Refractory                   | 1985               | 0                | --              |
| 77         | Burnt Refractory                   | 1955               | 12               | 0               |
| 77A        | Burnt Refractory                   | 1985               | 0                | --              |
| 78         | Burnt Refractory                   | 1955               | 2                | 0               |
| 78A        | Burnt Refractory                   | 1985               | 0                | --              |
| 79A        | Fluorspar                          | 1971               | 1                | 100             |
| 80         | Soda-Lime Glass                    | 1927               | 2                | 0               |
| 81A        | Glass Sand                         | 1978               | 0                | --              |
| 88         | Dolomite                           | 1928               | 14               | 21              |
| 88A        | Dolomitic Limestone                | 1982               | 100              | 48              |
| 88B        | Dolomitic Limestone                | 1986               | 0                | --              |
| 91         | Opal Glass                         | 1931               | 54               | 20              |
| 92         | Soda-Lime Glass Powder             | 1982               | 3                | 100             |
| 93A        | Borosilicate Glass                 | 1973               | 2                | 0               |
| 97         | Flint Clay                         | 1931               | 86               | 3               |
| 97A        | Flint Clay                         | 1969               | 64               | 22              |
| 98         | Plastic Clay                       | 1931               | 134              | 0               |
| 98A        | Plastic Clay                       | 1969               | 60               | 20              |
| 99         | Soda Feldspar                      | 1931               | 57               | 2               |
| 99A        | Feldspar                           | 1981               | 42               | 12              |
| 120A       | Phosphate Rock (Florida)           | 1961               | 21               | 24              |
| 120B       | Phosphate Rock (Florida)           | 1979               | 188              | 43              |
| 181        | Lithium Ore (Spodumene)            | 1981               | 1                | 100             |
| 182        | Lithium Ore (Petalite)             | 1981               | 0                | --              |
| 183        | Lithium Ore (Lepidolite)           | 1981               | 0                | --              |
| 278        | Obsidian Rock                      | 1981               | 296              | 59              |
| 330        | Copper Ore, Mill Heads             | 1977               | 0                | --              |
| 331        | Copper Ore, Mill Tails             | 1977               | 0                | --              |
| 332        | Copper Concentrate                 | 1977               | 1                | 100             |
| 333        | Molybdenum Concentrate             | 1977               | 0                | --              |
| 470        | Mineral Glasses for Microanalysis  | 1979               | 0                | --              |
| 610        | Trace Elements in Glass (500 ppm)  | 1972               | 126              | 72              |
| 612        | Trace Elements in Glass (50 ppm)   | 1982               | 112              | 85              |
| 614        | Trace Elements in Glass (1 ppm)    | 1982               | 81               | 84              |
| 616        | Trace Elements in Glass (0.02 ppm) | 1982               | 24               | 88              |

TABLE I: NATIONAL BUREAU OF STANDARDS BIOLOGICAL, ENVIRONMENTAL, AND GEOLOGICAL STANDARD REFERENCE MATERIALS  
(cont.)

| SRM Number | Name                                      | Certification Date | # data<br>(1986) | % New<br>(1986) |
|------------|---|--------------------|------------------|-----------------|
| 633        | Portland Cement                           | 1974               | 11               | 100             |
| 634        | Portland Cement                           | 1974               | 3                | 100             |
| 635        | Portland Cement                           | 1974               | 10               | 100             |
| 636        | Portland Cement                           | 1974               | 11               | 100             |
| 637        | Portland Cement                           | 1974               | 10               | 100             |
| 638        | Portland Cement                           | 1974               | 10               | 100             |
| 639        | Portland Cement                           | 1974               | 10               | 100             |
| 688        | Basalt Rock                               | 1981               | 255              | 76              |
| 694        | Western Phosphate Rock                    | 1984               | 0                | --              |
| 696        | Bauxite (Surinam)                         | 1979               | 30               | 100             |
| 697        | Bauxite (Dominican)                       | 1979               | 0                | --              |
| 698        | Bauxite (Jamaican)                        | 1979               | 33               | 100             |
| 909        | Human Serum                               | 1985               | 0                | --              |
| 1083       | Wear-Metals in Lubricating Oil            | 1985               | 0                | --              |
| 1084       | Wear-Metals in Lubridating Oil            | 1985               | 30               | 100             |
| 1085       | Wear-Metals in Lubricating Oil            | 1985               | 27               | 100             |
| 1549       | Non-Fat Milk Powder                       | 1984               | 56               | 100             |
| 1566       | Oyster Tissue                             | 1983               | 425              | 77              |
| 1567       | Wheat Flour                               | 1978               | 317              | 55              |
| 1568       | Rice Flour                                | 1978               | 269              | 58              |
| 1569       | Brewer's Yeast                            | 1976               | 139              | 12              |
| 1570       | Trace Elements in Spinach                 | 1976               | 715              | 36              |
| 1571       | Orchard Leaves                            | 1977               | 3113             | 27              |
| 1572       | Citrus Leaves                             | 1982               | 139              | 89              |
| 1573       | Tomato Leaves                             | 1976               | 758              | 34              |
| 1575       | Pine Needles                              | 1976               | 664              | 34              |
| 1577       | Bovine Liver                              | 1977               | 2262             | 23              |
| 1577a      | Bovine Liver                              | 1982               | 216              | 100             |
| 1581A      | PCBs in Oil                               | 1982               | 0                | --              |
| 1581B      | PCBs in Oil                               | 1982               | 0                | --              |
| 1581C      | PCBs in Oil                               | 1982               | 0                | --              |
| 1581D      | PCBs in Oil                               | 1982               | 0                | --              |
| 1582       | Petroleum Crude Oil                       | 1984               | 8                | 100             |
| 1584       | Priority Pollutant Phenols                | 1984               | 10               | 100             |
| 1585       | Chlorinated Biphenyls                     | 1986               | 0                | --              |
| 1587       | Nitrated Polycyclic Aromatic Hydrocarbons | 1985               | 0                | --              |
| 1590       | Stabililzed Wine                          | 1985               | 4                | 100             |
| 1614       | Dioxin                                    | 1985               | 0                | --              |

TABLE I: NATIONAL BUREAU OF STANDARDS BIOLOGICAL, ENVIRONMENTAL, AND GEOLOGICAL STANDARD REFERENCE MATERIALS  
(cont.)

| SRM Number | Name   | Certification Date | # data<br>(1986) | % New<br>(1986) |
|------------|--|--------------------|------------------|-----------------|
| 1618       | Vanadium and Nickel in Residual Fuel Oil             | 1985               | 0                | --              |
| 1619       | Sulfur in Residual Fuel Oil                          | 1981               | 18               | 100             |
| 1620       | Sulfur in Residual Fuel Oil                          | 1979               | 0                | --              |
| 1620a      | Sulfur in Residual Fuel Oil                          | 1981               | 19               | 100             |
| 1621       | Sulfur in Residual Fuel Oil                          | 1967               | 5                | 20              |
| 1621a      | Sulfur in Residual Fuel Oil                          | 1980               | 7                | 14              |
| 1621b      | Sulfur in Residual Fuel Oil                          | 1981               | 7                | 100             |
| 1622       | Sulfur in Residual Fuel Oil                          | 1967               | 2                | 100             |
| 1622a      | Sulfur in Residual Fuel Oil                          | 1979               | 5                | 20              |
| 1622b      | Sulfur in Residual Fuel Oil                          | 1981               | 7                | 100             |
| 1622c      | Sulfur in Residual Fuel Oil                          | 1986               | 0                | --              |
| 1623       | Sulfur in Residual Fuel Oil                          | 1971               | 4                | 0               |
| 1623a      | Sulfur in Residual Fuel Oil                          | 1981               | 6                | 100             |
| 1624       | Sulfur in Distillate Fuel Oil                        | 1971               | 4                | 0               |
| 1624a      | Sulfur in Distillate (Diesel) Fuel Oil               | 1981               | 6                | 100             |
| 1630       | Trace Mercury in Coal                                | 1971               | 72               | 4               |
| 1631A      | Sulfur in Coal                                       | 1974               | 8                | 50              |
| 1631B      | Sulfur in Coal                                       | 1974               | 6                | 33              |
| 1631C      | Sulfur in Coal                                       | 1974               | 7                | 43              |
| 1632       | Trace Elements in Coal                               | 1974               | 1810             | 16              |
| 1632A      | Trace Elements in Coal (Bituminous)                  | 1983               | 952              | 51              |
| 1632B      | Trace Elements in Coal (Bituminous)                  | 1985               | 0                | --              |
| 1633       | Trace Elements in Coal Fly Ash                       | 1975               | 2057             | 13              |
| 1633A      | Trace Elements in Coal Fly Ash                       | 1985               | 850              | 60              |
| 1634       | Trace Elements in Fuel Oil                           | 1975               | 138              | 17              |
| 1634A      | Trace Elements in Fuel Oil                           | 1982               | 95               | 100             |
| 1634B      | Trace Elements in Fuel Oil                           | 1986               | 0                | --              |
| 1635       | Trace Elements in Coal (Subbituminous)               | 1979               | 454              | 46              |
| 1639       | Halocarbons for Water Analysis                       | 1983               | 0                | --              |
| 1641       | Mercury in Water - Concentrate                       | 1975               | 1                | 0               |
| 1641A      | Mercury in Water - ug/mL                             | 1978               | 0                | --              |
| 1641B      | Mercury in Water - ug/mL                             | 1983               | 1                | 100             |
| 1642       | Mercury in Water - Trace                             | 1974               | 0                | --              |
| 1642A      | Mercury in Water - ng/mL                             | 1977               | 4                | 75              |
| 1642B      | Mercury in Water - ng/mL                             | 1982               | 2                | 100             |
| 1643       | Trace Elements in Water                              | 1977               | 132              | 61              |
| 1643A      | Trace Elements in Water                              | 1980               | 313              | 88              |
| 1643B      | Trace Elements in Water                              | 1984               | 29               | 100             |
| 1645       | River Sediment                                       | 1982               | 524              | 64              |
| 1646       | Estuarine Sediment                                   | 1982               | 173              | 98              |
| 1647       | Priority Pollutant Polynuclear Aromatic Hydrocarbons | 1981               | 13               | 100             |
| 1648       | Urban Particulate Matter                             | 1982               | 371              | 33              |
| 1649       | Urban Dust/Organics                                  | 1982               | 64               | 64              |

TABLE I: NATIONAL BUREAU OF STANDARDS BIOLOGICAL, ENVIRONMENTAL, AND GEOLOGICAL STANDARD REFERENCE MATERIALS  
(cont.)

| SRM Number | Name   | Certification Date | # data<br>(1986) | % New<br>(1986) |
|------------|--|--------------------|------------------|-----------------|
| 1818       | Total Chlorine in Lubricating Base Oil               | 1986               | 0                | --              |
| 1819       | Sulfur in Lubricating Base Oil                       | 1985               | 0                | --              |
| 1880       | Portland Cement                                      | 1984               | 0                | --              |
| 1881       | Portland Cement                                      | 1984               | 0                | --              |
| 2661       | Benzene on Charcoal                                  | 1977               | 0                | --              |
| 2661A      | Benzene on Charcoal                                  | 1978               | 2                | 100             |
| 2662       | m-Xylene on Charcoal                                 | 1977               | 0                | --              |
| 2663       | p-Dioxane on Charcoal                                | 1977               | 1                | 100             |
| 2664       | 1,2-Dichloroethane on Charcoal                       | 1977               | 2                | 100             |
| 2665       | Chloroform on Charcoal                               | 1977               | 1                | 100             |
| 2666       | Trichloroethylene on Charcoal                        | 1977               | 1                | 100             |
| 2667       | Carbon tetrachloride on Charcoal                     | 1977               | 1                | 100             |
| 2670       | Toxic Metals in Freeze-Dried Urine                   | 1985               | 17               | 100             |
| 2671       | Freeze Dried Urine Certified for Fluorine            | 1975               | 0                | --              |
| 2672       | Freeze-Dried Urine Certified for Mercury             | 1975               | 3                | 100             |
| 2674       | Lead on Filter Media                                 | 1979               | 0                | --              |
| 2675       | Beryllium on Filter Media                            | 1975               | 1                | 100             |
| 2676       | Metals on Filter Media                               | 1975               | 0                | --              |
| 2676A      | Metals on Filter Media                               | 1978               | 9                | 100             |
| 2676B      | Metals on Filter Media                               | 1983               | 0                | --              |
| 2677       | Beryllium and Arsenic on Filter Media                | 1985               | 0                | --              |
| 2679       | Quartz on Filter Media                               | 1976               | 0                | --              |
| 2682       | Sulfur in Coal                                       | 1983               | 75               | 100             |
| 2683       | Sulfur in Coal                                       | 1983               | 67               | 100             |
| 2684       | Sulfur in Coal                                       | 1983               | 67               | 100             |
| 2685       | Sulfur in Coal                                       | 1983               | 67               | 100             |
| 2689       | Coal Fly Ash   | 1986               | 0                | --              |
| 2690       | Coal Fly Ash   | 1986               | 0                | --              |
| 2691       | Coal Fly Ash   | 1986               | 0                | --              |
| 2694       | Simulated Rainwater                                  | 1986               | 0                | --              |
| 4350       | Environmental Radioactivity Standard: River Sediment | 1975               | 12               | 67              |
| 4350B      | Environmental Radioactivity: River Sediment          | 1981               | 23               | 74              |
| 4351       | Environmental Radioactivity: Human Lung              | 1982               | 0                | --              |
| 4352       | Environmental Radioactivity: Human Liver             | 1982               | 0                | --              |
| 4353       | Environmental Radioactivity: Rocky Flats Soil #1     | 1981               | 28               | 82              |
| 4355       | Environmental Radioactivity: Peruvian Soil           | 1982               | 0                | --              |
| 8412       | Corn (Zea Mays) Stalk                                | 1986               | 0                | --              |
| 8413       | Corn (Zea Mays) Kernel                               | 1986               | 0                | --              |
| 8419       | Bovine Serum   | 1985               | 84               | 100             |
| 8431       | Mixed Diet   | 1986               | 0                | --              |

TABLE II: LITERATURE SURVEYED

| Journal  | Vol. #                | # data | % total |
|--|-----------------------|--------|---------|
| Acta Chimica Hungarica   | 113 - 119             | 0      | ---     |
| Acta Chimica Scandanavia   | 39A, 39B              | 0      | ---     |
| American Laboratory  | 11 - 17               | 132    | 0.6     |
| American Mineralogist  | 67 - 70               | 0      | ---     |
| Analisis   | 1 - 13                | 128    | 0.6     |
| Analyst  | 97 - 110              | 922    | 4.6     |
| Analytica Chimica Acta   | 53 - 178              | 1115   | 5.5     |
| Analytical Chemistry   | 44 - 57               | 3574   | 17.7    |
| Analytical Instrumentation   | 13 - 14               | 0      | ---     |
| Analytical Letters   | 1 - 18                | 97     | 0.5     |
| Annales de la Societe Geologique de Belgique   | 91 - 108              | 0      | ---     |
| Applied Spectroscopy   | 25 - 39               | 265    | 1.3     |
| Atomic Absorption Newsletter   | 1 - 18                | 111    | 0.6     |
| Atomic Spectrometry  | 1 - 6                 | 169    | 0.8     |
| Biological Trace Element Research  | 1 - 8                 | 31     | 0.2     |
| Bulletin des Societes Chimiques Belges   | 80 - 94               | 3      | <0.1    |
| Bunseki Kagaku   | 24 - 34               | 966    | 4.8     |
| Canadian Journal of Earth Sciences   | 9 - 22                | 20     | 0.1     |
| Canadian Journal of Spectroscopy   | 20 - 30               | 59     | 0.3     |
| Chemical Geology   | 13 - 53               | 108    | 0.5     |
| Comptes-Rendus Hebdomadaires des Seances de l'Academie<br>des Sciences (Paris)       | 272 - 301             | 1      | <0.1    |
| Conference Proceedings   | ---                   | 1523   | 7.6     |
| Contributions to Mineralogy and Petrology  | 36 - 91               | 10     | <0.1    |
| Earth and Planetary Science Letters  | 1 - 77                | 15     | <0.1    |
| Economic Geology   | 67 - 80               | 0      | ---     |
| Environmental Geology  | 1 - 5                 | 9      | <0.1    |
| Environmental Letters  | 1 - 10                | 13     | <0.1    |
| Environmental Pollution  | 29A - 39A<br>1B - 10B | 22     | 0.1     |
| Environmental Research   | 1 - 38                | 4      | <0.1    |
| Environmental Science and Technology   | 5 - 19                | 469    | 2.3     |
| Fresenius Zeitschrift fur Analytische Chemie   | 244 - 322             | 589    | 2.9     |
| Geochemistry International (trans. from Geokhimiya)                                  | 9 - 22                | 0      | ---     |
| Geophysical Research Letters   | 1 - 7                 | 25     | 0.1     |
| Geochimica et Cosmochimica Acta  | 36 - 49               | 169    | 0.8     |
| Geostandards Newsletter  | 1 - 9                 | 1146   | 5.7     |
| Geotechnical Testing Journal   | 1 - 7                 | 0      | ---     |
| Geochemical Journal  | 7 - 19                | 6      | <0.1    |
| International Journal of Applied Radiation and Isotopes                              | 23 - 36               | 14     | <0.1    |
| International Journal of Environmental Analytical Chemistry                          | 1 - 23                | 161    | 0.8     |
| International Journal of Environmental Studies                                       | 1 - 25                | 9      | <0.1    |
| Journal of Analytical Chemistry of USSR (trans. of<br>Zhurnal Analiticheskoi Khimii) | 26 - 38               | 0      | ---     |
| Journal of Environmental Quality   | 1 - 14                | 14     | <0.1    |
| Journal of Environmental Radioactivity   | 1 - 3                 | 0      | ---     |
| Journal of Environmental Science and Health  | 11 - 20               | 79     | 0.4     |
| Journal of Geochemical Exploration   | 1 - 24                | 0      | ---     |
| Journal of Petrology   | 12 - 26               | 0      | ---     |

TABLE II: LITERATURE SURVEYED (cont.)

| Journal  | Vol. #      | # data | % total |
|--|-------------|--------|---------|
| Journal of Radioanalytical and Nuclear Chemistry           | 10 - 96     | 2436   | 12.1    |
| Journal of Research of the USGS                            | 1 - 6       | 25     | 0.1     |
| Journal of the Association of Official Analytical Chemists | 55 - 68     | 734    | 3.6     |
| Journal of the Geological Society (London)                 | 127 - 142   | 0      | ---     |
| Journal of the Soil Science Society of America             | 46 - 48     | 2      | <0.1    |
| Journal of the South African Chemical Institute            | 21 - 37     | 0      | ---     |
| Journal of Volcanology and Geothermal Research             | 1 - 26      | 0      | ---     |
| Lithos   | 4 - 18      | 0      | ---     |
| Marine Geology   | 12 - 44     | 0      | ---     |
| Mass Spectroscopy  | 31 - 32     | 0      | ---     |
| Microchemical Journal                                      | 17 - 28     | 3      | <0.1    |
| Mikrochimica Acta (Wien)                                   | 1972 - 1984 | 98     | 0.5     |
| Mineralogy Magazine  | 40 - 44     | 0      | ---     |
| Nuclear Instruments and Methods                            | 114 - 172   | 268    | 1.3     |
| Precambrian Research                                       | 1 - 14      | 2      | <0.1    |
| Private (Written) Communication                            | ---         | 278    | 1.4     |
| Radiochimica Acta  | 17 - 38     | 0      | ---     |
| Radiochemical and Radioanalytical Letters                  | 1 - 59      | 468    | 2.3     |
| Reports and Books  | ---         | 2617   | 13.0    |
| Sedimentology  | 16 - 28     | 0      | ---     |
| Spectrochimica Acta  | 278 - 408   | 423    | 2.1     |
| Spectroscopy Letters                                       | 17 - 18     | 0      | ---     |
| Talanta  | 19 - 32     | 238    | 1.2     |
| X-ray Spectrometry   | 1 - 14      | 179    | 0.9     |
| Misc. sources  | ---         | 364    |         |
| Total  | ---         | 20113  | 100.0   |

TABLE III: WHOLE MATERIAL CONCENTRATION SUMMATIONS OF MAJOR AND MINOR ELEMENTS FOR SELECTED NBS SRMs (%)

| ELE   | 1633                   | 1633A                  | 1632                   | 1632A                  | 1635                   |
|-------|------------------------|------------------------|------------------------|------------------------|------------------------|
|       | CONSENSUS<br>Mean ± SD |
| Al    | 12.6 ± 0.6             | 14.4 ± 0.7             | 1.73 ± 0.10            | 2.95 ± 0.10            | 0.295 ± 0.027          |
| Ba    | 0.266 ± 0.016          | 0.142 ± 0.010          | ---                    | ---                    | ---                    |
| C     | 3.3 ± 0.2              | ---                    | 70.6 ± 1.7             | 64.4 ± 3.9             | 62.6                   |
| Ca    | 4.65 ± 0.34            | 1.14 ± 0.06            | 0.418 ± 0.042          | 0.241 ± 0.017          | 0.535 ± 0.034          |
| Fe    | 6.16 ± 0.27            | 9.37 ± 0.23            | 0.851 ± 0.044          | 1.11 ± 0.03            | 0.229 ± 0.006          |
| H     | 0.02                   | 0.04                   | 4.29 ± 0.22            | 4.1 ± 0.4              | 4.07                   |
| K     | 1.69 ± 0.09            | 1.88 ± 0.05            | 0.278 ± 0.017          | 0.411 ± 0.02           | ---                    |
| Mg    | 1.5 ± 0.3              | 0.457 ± 0.045          | 0.156 ± 0.041          | 0.115 ± 0.02           | 0.104 ± 0.013          |
| N     | ---                    | ---                    | 1.20 ± 0.14            | 1.25 ± 0.04            | 1.16 ± 0.32            |
| Na    | 0.3130 ± 0.02          | 0.173 ± 0.011          | ---                    | ---                    | 0.239 ± 0.020          |
| O     | 47.02                  | 47.66                  | 12.6                   | 18.8 ± 0.8             | 30 ± 8                 |
| P     | 0.101 ± 0.018          | 0.169 ± 0.024          | ---                    | ---                    | ---                    |
| S     | 0.450 ± 0.050          | 0.190 ± 0.070          | 1.32 ± 0.08            | 1.55 ± 0.05            | 0.336 ± 0.024          |
| Si    | 22.0 ± 1.0             | 23.0 ± 0.9             | 3.08 ± 0.24            | 5.87 ± 0.22            | 0.590 ± 0.050          |
| Sr    | 0.138 ± 0.010          | ---                    | ---                    | ---                    | ---                    |
| Ti    | 0.710 ± 0.050          | 0.823 ± 0.039          | ---                    | 0.163 ± 0.01           | ---                    |
| Other | 0.33                   | 0.39                   | 0.33                   | 0.27                   | 0.01                   |
| Total | 101.25 ± 1.3           | 99.83 ± 1.17           | 96.85 ± 1.74           | 101.23 ± 4.01          | 100.2 ± 8.1            |

| OXIDE                          | 278                    | 688                    |
|--------------------------------|------------------------|------------------------|
|                                | CONSENSUS<br>Mean ± SD | CONSENSUS<br>Mean ± SD |
| Al <sub>2</sub> O <sub>3</sub> | 14.39 ± 0.25           | 17.33 ± 0.30           |
| BaO                            | 0.11 ± 0.01            | ---                    |
| CO <sub>2</sub>                | 0.18                   | 0.05                   |
| CaO                            | 1.00 ± 0.02            | 11.85 ± 0.50           |
| Fe <sub>2</sub> O <sub>3</sub> | 0.49                   | 1.8                    |
| FeO <sup>+</sup>               | 1.38                   | 7.645                  |
| H <sub>2</sub> O <sup>+</sup>  | 0.30                   | 0.14                   |
| H <sub>2</sub> O <sup>-</sup>  | 0.05                   | 0.11                   |
| K <sub>2</sub> O               | 4.07 ± 0.12            | 0.19 ± 0.01            |
| MgO                            | 0.25                   | 8.72 ± 0.36            |
| MnO                            | 0.05 ± 0.01            | 0.16 ± 0.01            |
| Na <sub>2</sub> O              | 4.72 ± 0.05            | 2.09 ± 0.11            |
| P <sub>2</sub> O <sub>5</sub>  | 0.03                   | 0.16 ± 0.05            |
| SiO <sub>2</sub>               | 71.52 ± 1.28           | 48.22 ± 0.32           |
| TiO <sub>2</sub>               | 0.24 ± 0.01            | 1.18 ± 0.03            |
| Other                          | 0.16                   | 0.17                   |
| Total                          | 98.98 ± 1.31           | 99.82 ± 0.77           |

TABLE IV: ANALYTICAL METHOD CODES FOR INDIVIDUAL DATA TABLES

| Code  | Specific Technique   | Code  | Specific Technique  |
|-------|--|-------|---|
| 14NAA | 14 MeV Neutron Activation Analysis                                   | GRAV  | Gravimetry  |
| AA    | General, Flame Atomic Absorption: Unspecified, or Mixed Conditions   | HAA   | Hydride Evolution Atomic Absorption                                   |
| AAC   | Flame Atomic Absorption Preceded by Chemical Separation              | I     | Infrared  |
| ABS   | Absorption (69FLA 01)  | IC    | Ion Chromatography  |
| AE+AF | Atomic Emission + Atomic Fluorescence                                | ICPAF | Inductively Coupled Plasma Atomic Fluorescence                        |
| AF    | Atomic Fluorescence  | ICPES | Inductively Coupled Plasma Atomic Emission Spectrometry               |
| AS    | Alpha Spectrometry   | ICPMS | Inductively Coupled Plasma Mass Spectrometry                          |
| ASV   | Anodic Stripping Voltammetry   | IDMS  | Isotope Dilution Mass Spectrometry                                    |
| CALC  | Calculated   | IE    | Ion Exchange (76FLA 04)   |
| CB    | Combustion: Elemental Analyzer                                       | IENA  | Instrumental Epithermal Neutron Activation                            |
| CB-GC | Combustion + Gas Chromatography                                      | ISE   | Ion Selective Electrodes  |
| CHEM  | Chemical (taken from several other compilers, usually undefined)     | ITNA  | Instrumental Thermal Neutron Activation                               |
| CHEML | Chemiluminescence, Candoluminescence                                 | KF    | Karl Fischer Method for H <sub>2</sub> O <sup>+</sup>                 |
| CHROM | Chromatographic  | LC    | Liquid Chromatography (reversed or normal phase)                      |
| COLOR | Colorimetry, Photometry, Spectrophotometry                           | MECA  | Molecular Emission Cavity Analysis                                    |
| CONV  | Conventional (taken from several other compilers, usually undefined) | MOSS  | Mossbauer Spectroscopy  |
| COUL  | Coulometry   | MPOES | Microwave Plasma Optical Emission Spectrometry                        |
| CPAA  | Charged Particle Activation Analysis                                 | MS    | General Mass Spectrometry   |
| CPXRF | Charged Particle Induced X-ray Fluorescence                          | NAA   | Neutron Activation Analysis: General, unspecified, or mixed conditons |
| CSV   | Cathodic Stripping Voltammetry                                       | NM    | Nuclear Methods (general)   |
| CVAA  | Cold Vapor Atomic Absorption   | NT    | Nuclear Track   |
| DCPES | Direct Coupled Plasma Atomic Emission Spectrometry                   | OES   | General, DC Arc Optical Emission Spectrometry                         |
| DNA   | Delayed Neutron Activation Analysis                                  | PAA   | Photon Activation or X-ray Activation Analysis                        |
| ESCA  | Electron Spectroscopy for Chemical Applications                      | PC    | Paper Chromatography <sub>+</sub>                                     |
| ESR   | Electron Spin Resonance  | PEN   | Penfield Method (H <sub>2</sub> O <sub>2</sub> )                      |
| EXRF  | Energy Dispersive X-ray Fluorescence                                 | POL   | Polarography  |
| FA    | Fire Assay   | POT   | Potentiometry (69FLA 01, 69FLE 01)                                    |
| FA-AA | Fire Assay-Atomic Absorption   | PM    | Petrographic Microscope   |
| FA-OS | Fire Assay-Optical Emission Spectrometry                             | PROBE | Ion or Electron Microprobe Mass Analyzer                              |
| FAA   | Flameless Atomic Absorption (Electrothermal, Carbon Rod)             | PYHYD | Pyrohydrolysis  |
| FAAC  | Flameless Atomic Absorption Preceded by Chemical Separation          | RENA  | Radiochemical Epithermal Neutron Activation                           |
| FAE   | Flameless Atomic Emission  | RR    | Rapid rock  |
| FD    | Freeze Drying  | RTNA  | Radiochemical Thermal Neutron Activation                              |
| FE    | Flame Emission, Flame Photometry, Atomic Emission                    | SIMS  | Secondary Ion Mass Spectrometry                                       |
| FLUOR | Fluorometry  | SM    | Semi-micro (69FLE 01)   |
| GAMMA | Direct Gamma-ray Counting (without activation)                       | SSMS  | Spark-source Mass Spectrometry  |
| GC    | Gas Chromatography   | TC    | Thermal Conductivity  |
| GC-AA | Gas Chromatography-Atomic Absorption Spectrometry                    | TCGS  | Thermal Neutron Capture Prompt Gamma-ray Spectrometry                 |
| GC-MS | Gas Chromatography-Mass Spectrometry                                 | TITR  | Titrimetry  |
| GCMES | Gas Chromatography Microwave Emission                                | TURB  | Turbidimetry  |
| GE    | Gas Evolution (CO <sub>2</sub> in rocks)                             | UU    | Unspecified   |
|       |  | VOLT  | Voltammetry (76FLA 04)  |
|       |  | VOLU  | Volumetry (76FLA 04)  |
|       |  | VV    | Various, Mixed Methods  |
|       |  | WXRF  | Wavelength Dispersive X-ray Fluorescence                              |
|       |  | XRF   | General or Unspecified X-ray Fluorescence                             |

TABLE V: COMMENT Codes for Individual Data Tables

| Code | Definition  |
|------|---|
| *    | Data eliminated from all mean value calculations.   |
| D    | Same data reported in two or more references. Duplicate data are flagged and oldest reference used in mean calculations.            |
| H    | Hydride generation  |
| L    | Limit (less than) data. Not used in computations.   |
| R    | Concentration range. Not used in computations.  |
| 1    | Different nebulizers used for independent results.  |
| 2    | V <sub>2</sub> O <sub>5</sub> catalyst used in dissolution.   |
| 3    | Different electrodes used for independent results.  |
| 4    | Aqueous slurry of reground sample.  |
| 5    | Different radioactive isotopes or irradiation conditions used for independent results.  |
| 6    | Different methods of standardization used for independent results.  |
| 7    | Different chemical separation methods used for independent results.   |
| 8    | Isotope dilution methods combined with spark source mass spectrometry.  |
| 9    | Gamma-gamma coincidence.  |
| 10   | Different neutron filters used for independent results by epithermal neutron activation analysis.                                   |
| 11   | Different dissolution or matrix destruction methods used for independent results.   |
| 12   | Different methods of peak integration or dead time correction used for independent results.   |
| 13   | Different detectors used for independent results.   |
| 14   | Different furnace configurations used for independent results.  |
| 15   | Different laboratories prepared fused beads used for independent results.   |
| 16   | Different matrix correction methods used for independent results.   |
| 17   | Different laboratories or analysts reporting independent results in same reference.   |
| 18   | Different bottles of reference material used for independent results.   |
| 19   | Duplicate entries from same reference from previous data compilation assembled by another compiler; reason for duplication unknown. |
| 20   | Different emission/absorption lines used for independent results.   |
| 21   | Dichromate used for FEO determination (76FLA 04).   |
| 22   | Vanadate used for FEO determination (76FLA 04).   |
| 23   | Modified Penfield method used for H <sub>2</sub> O <sup>+</sup> determination.  |
| 24   | Different irradiation containers used for independent results.  |
| 25   | Different colorimetric methods used for independent results.  |
| 26   | CONC and UNCER should be multiplied by 10(-5).  |
| 28   | CONC and UNCER should be multiplied by 10(-3).  |
| 30   | Results were used by NBS to determine certified values.   |
| 31   | Different chemical methods used for independent results.  |
| 32   | Different background correction or excitation sources or crystals used for independent results by XRF.                              |
| 33   | Different pellet sizes used for independent results.  |
| 34   | Reported on a dry weight basis.   |
| 35   | Reported on an as-received basis.   |
| 36   | OES pre-ignition at various temperatures for independent results.   |
| 37   | Karl Fischer titration for H <sub>2</sub> O <sup>+</sup> .  |
| 38   | CONC and UNCER are X10(9), A/G=atoms/gram   |
| 40   | Different gamma-rays from the same isotope used for independent results.  |
| 41   | Acid evolution method for CO <sub>2</sub> determination.  |
| 44   | Different conditions employed for independent results by Liquid Chromatography.   |

TABLE VI: Factors Used for Oxide to Element Conversions

| Oxide                          | Multiplier | Oxide                   | Multiplier |
|--------------------------------|------------|-------------------------|------------|
| $\text{Al}_2\text{O}_3$        | 0.529      | $\text{Mn}_2\text{O}_3$ | 0.696      |
| $\text{B}_2\text{O}_3$         | 0.311      | $\text{Mn}_3\text{O}_4$ | 0.720      |
| BaO                            | 0.896      | $\text{MoO}_3$          | 0.667      |
| BeO                            | 0.360      | $\text{Na}_2\text{O}$   | 0.742      |
| $\text{CO}_2$                  | 0.273      | $\text{Nd}_2\text{O}_3$ | 0.857      |
| CaO                            | 0.715      | NiO                     | 0.786      |
| CdO                            | 0.875      | $\text{P}_2\text{O}_5$  | 0.436      |
| CoO                            | 0.786      | PbO                     | 0.928      |
| $\text{Cr}_2\text{O}_3$        | 0.684      | $\text{Rb}_2\text{O}$   | 0.914      |
| $\text{Cs}_2\text{O}$          | 0.943      | $\text{SiO}_2$          | 0.467      |
| CuO                            | 0.799      | $\text{SO}_3$           | 0.400      |
| FeO to $\text{Fe}_2\text{O}_3$ | 1.112      | $\text{Sc}_2\text{O}_3$ | 0.652      |
| FeO                            | 0.777      | SrO                     | 0.846      |
| $\text{Fe}_2\text{O}_3$        | 0.699      | $\text{TiO}_2$          | 0.599      |
| $\text{Ga}_2\text{O}_3$        | 0.592      | $\text{U}_3\text{O}_8$  | 0.848      |
| $\text{K}_2\text{O}$           | 0.830      | $\text{V}_2\text{O}_5$  | 0.560      |
| $\text{La}_2\text{O}_3$        | 0.853      | $\text{Y}_2\text{O}_3$  | 0.787      |
| $\text{Li}_2\text{O}$          | 0.465      | ZnO                     | 0.803      |
| MgO                            | 0.603      | $\text{ZrO}_2$          | 0.740      |
| MnO                            | 0.774      |                         |            |

TABLE 1A-1: COMPILED DATA FOR NBS SRM 1A ARGILLACEOUS LIMESTONE (revised 3/1/86)

| ELE | UNITS | NBS   | CONSENSUS       |     | MEDIAN | RANGE       | XRF      | OES            |     | OTHER METHODS   |     |        |
|-----|-------|-------|-----------------|-----|--------|-------------|----------|----------------|-----|-----------------|-----|--------|
|     |       | Mean  | Mean $\pm$ SD   | (n) |        |             |          | Mean $\pm$ SD  | (n) | Mean $\pm$ SD   | (n) | Method |
| Al  | %     | 2.2   | 2.23 $\pm$ 0.08 | (7) | 2.23   | 2.1 - 2.36  | ---      | 2.16           | (2) | 2.18            | (2) | COLOR  |
| Al  | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 2.36            | (1) | RR     |
| Al  | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 2.29            | (1) | TITR   |
| Al  | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 2.27            | (1) | DCPES  |
| As  | ug/g  | ---   | 1.6             | (1) | ---    | ---         | ---      | ---            | --- | 1.6             | (1) | AA     |
| B   | ug/g  | ---   | 90              | (2) | ---    | 80 - 100    | ---      | 90             | (2) | ---             | --- | ---    |
| Ba  | ug/g  | ---   | < 800           | --- | ---    | ---         | ---      | < 800          | --- | ---             | --- | ---    |
| Be  | ng/g  | ---   | 670             | (1) | ---    | ---         | ---      | ---            | --- | 670             | (1) | AA     |
| Bi  | ng/g  | ---   | 57              | (1) | ---    | ---         | ---      | ---            | --- | 57              | (1) | AA     |
| C-I | %     | 9.15  | 9.05 $\pm$ 0.20 | (3) | 9.16   | 8.82 - 9.17 | ---      | ---            | --- | 9.05 $\pm$ 0.20 | (3) | COUL   |
| C-O | ug/g  | 6100  | 5600            | (1) | ---    | ---         | ---      | ---            | --- | 5600            | (1) | CALC   |
| C-T | %     | ---   | 9.72            | (2) | ---    | 9.72 - 9.73 | ---      | ---            | --- | 9.72            | (1) | COUL   |
| C-T | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 9.73            | (1) | CB     |
| Ca  | %     | 29.54 | 29.6 $\pm$ 0.1  | (3) | 29.6   | 29.5 - 29.7 | 29.6 (1) | ---            | --- | 29.7            | (1) | DCPES  |
| Ca  | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 29.5            | (1) | RR     |
| Cd  | ng/g  | ---   | 32              | (1) | ---    | ---         | ---      | ---            | --- | 32              | (1) | AA     |
| Co  | ug/g  | ---   | 3.9             | (1) | ---    | ---         | ---      | ---            | --- | 3.9             | (1) | NAA    |
| Cr  | ug/g  | ---   | 26.5            | (2) | ---    | 23 - 30     | ---      | 30             | (1) | 23              | (1) | NAA    |
| Cu  | ug/g  | ---   | 3               | (1) | ---    | ---         | ---      | 3              | (1) | ---             | --- | ---    |
| Fe  | %     | 1.14  | 1.11 $\pm$ 0.03 | (5) | 1.1    | 1.08 - 1.15 | ---      | 1.08           | (1) | 1.1             | (1) | COLOR  |
| Fe  | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 1.08            | (1) | DCPES  |
| Fe  | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 1.15            | (1) | TITR   |
| Fe  | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 1.13            | (1) | RR     |
| Ga  | ug/g  | ---   | 4               | (1) | ---    | ---         | ---      | 4              | (1) | ---             | --- | ---    |
| Hg  | ng/g  | ---   | 57.7            | (2) | ---    | 44 - 71.4   | ---      | ---            | --- | 57.7            | (2) | AA     |
| K   | ug/g  | 5900  | 6900            | (1) | ---    | ---         | ---      | ---            | --- | 6900            | (1) | RR     |
| La  | ug/g  | ---   | 100             | (1) | ---    | ---         | ---      | 100            | (1) | ---             | --- | ---    |
| LOI | %     | 34.55 | ---             | --- | ---    | ---         | ---      | ---            | --- | ---             | --- | ---    |
| Mg  | %     | 1.32  | 1.34 $\pm$ 0.05 | (4) | 1.3    | 1.29 - 1.39 | ---      | 1.30           | (2) | 1.39            | (1) | DCPES  |
| Mg  | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 1.37            | (1) | RR     |
| Mn  | ug/g  | 290   | 440 $\pm$ 100   | (3) | 500    | 320 - 500   | ---      | 440 $\pm$ 100  | (3) | ---             | --- | ---    |
| Mo  | ug/g  | ---   | < 1             | --- | ---    | ---         | ---      | < 1            | --- | ---             | --- | ---    |
| Na  | ug/g  | 2890  | 2500            | (2) | ---    | 2300 - 2700 | ---      | ---            | --- | 2700            | (1) | DCPES  |
| Na  | ug/g  | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 2300            | (1) | RR     |
| Ni  | ug/g  | ---   | 10              | (1) | ---    | ---         | ---      | 10             | (1) | ---             | --- | ---    |
| P   | ug/g  | 650   | 1075            | (2) | ---    | 650 - 1500  | 650 (1)  | 1500           | (1) | ---             | --- | ---    |
| Pb  | ug/g  | ---   | 19.3 $\pm$ 1.6  | (4) | 19.1   | 17.2 - 21   | ---      | 20             | (1) | 19.1 $\pm$ 1.9  | (3) | AA     |
| S   | ug/g  | 2500  | 2850 $\pm$ 160  | (8) | 2800   | 2620 - 3073 | ---      | 2800           | (1) | 2840 $\pm$ 200  | (5) | CB     |
| S   | ug/g  | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 3000            | (1) | TURB   |
| Sb  | ng/g  | ---   | 630             | (1) | ---    | ---         | ---      | ---            | --- | 630             | (1) | AA     |
| Sc  | ug/g  | ---   | 15              | (1) | ---    | ---         | ---      | 15             | (1) | ---             | --- | ---    |
| Si  | %     | 6.59  | 6.60 $\pm$ 0.08 | (5) | 6.58   | 6.53 - 6.72 | 6.53 (1) | 6.54           | (1) | 6.63            | (1) | COLOR  |
| Si  | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 6.58            | (1) | RR     |
| Si  | %     | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 6.72            | (1) | DCPES  |
| Sn  | ug/g  | ---   | 2.13            | (2) | ---    | 1.68 - 2.58 | ---      | ---            | --- | 2.13            | (2) | AA     |
| Sr  | ug/g  | 1950  | 1910 $\pm$ 140  | (4) | 1940   | 1700 - 2000 | ---      | 1880 $\pm$ 160 | (3) | 2000            | (1) | NAA    |
| Ti  | ug/g  | 960   | 940 $\pm$ 50    | (4) | 960    | 900 - 1000  | ---      | 1250           | (2) | 900             | (1) | DCPES  |
| Ti  | ug/g  | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 960             | (1) | NAA    |
| Ti  | ug/g  | ---   | ---             | --- | ---    | ---         | ---      | ---            | --- | 900             | (1) | RR     |
| U   | ug/g  | ---   | 156             | (1) | ---    | ---         | ---      | ---            | --- | 156             | (1) | ICPES  |
| V   | ug/g  | ---   | 30              | (1) | ---    | ---         | ---      | 30             | (1) | ---             | --- | ---    |
| Y   | ug/g  | ---   | 10              | (1) | ---    | ---         | ---      | 10             | (1) | ---             | --- | ---    |
| Zn  | ug/g  | ---   | 20.15           | (2) | ---    | 17 - 23.3   | 17 (1)   | ---            | --- | 23.3            | (1) | NAA    |
| Zr  | ug/g  | ---   | 60              | (1) | ---    | ---         | ---      | 60             | (1) | ---             | --- | ---    |

TABLE 1A-2: INDIVIDUAL DATA FOR NBS SRM 1A (revised 3/1/86)

| Conc              | Uncer  | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-------------------|--------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>     |        |     |        |           | <u>Cd (ng/g)</u> |       |     |        |           |
| 2.1               |        |     | OES    | 62JOE 01  | 32               |       |     | AA     | 84TER 01  |
| 2.17              | 0.01   | 11  | COLOR  | 83OHM 01  |                  |       |     |        |           |
| 2.19              | 0.01   | 11  | COLOR  | 83OHM 01  | <u>Co (ug/g)</u> |       |     |        |           |
| 2.23              |        |     | OES    | 78KNO 01  | <                | 10    | L   | OES    | 63CLA 01  |
| 2.27              |        |     | DCPES  | 73KAR 01  | 3.9              | 1.4   |     | RTNA   | 61TUR 01  |
| 2.29              |        |     | TITR   | 58WAT 01  | <u>Cr (ug/g)</u> |       |     |        |           |
| 2.36              |        |     | RR     | 73KAR 01  | 23               |       |     | RTNA   | 61TUR 01  |
| <u>As (ug/g)</u>  |        |     |        |           | 30               |       |     | OES    | 63CLA 01  |
| 1.6               |        |     | HAA    | 84TER 04  | <u>Cu (ug/g)</u> |       |     |        |           |
| <u>B (ug/g)</u>   |        |     |        |           | 3                |       |     | OES    | 63CLA 01  |
| 80                |        | 3   | OES    | 63CLA 01  | <u>Fe (%)</u>    |       |     |        |           |
| 100               |        | 3   | OES    | 63CLA 01  | 0.855            |       |     | OES    | 62JOE 01  |
| <u>Ba (ug/g)</u>  |        |     |        |           | 1.08             |       |     | OES    | 78KNO 01  |
| <                 | 800    | L   | OES    | 63CLA 01  | 1.08             |       |     | DCPES  | 73KAR 01  |
| <u>Be (ng/g)</u>  |        |     |        |           | 1.1              |       |     | COLOR  | 59COL 01  |
| 670               |        |     | AA     | 82TER 02  | 1.13             |       |     | RR     | 73KAR 01  |
| 670               |        | D   | AA     | 83TER 01  | 1.15             |       |     | TITR   | 69WIC 01  |
| <u>Bi (ng/g)</u>  |        |     |        |           | <u>Ga (ug/g)</u> |       |     |        |           |
| 57                |        | D   | FAA    | 84TER 03  | 4                |       |     | OES    | 63CLA 01  |
| 57                |        |     | HAA    | 84TER 02  | <u>Hg (ng/g)</u> |       |     |        |           |
| <u>C-I (%)</u>    |        |     |        |           | 44               |       |     | FAA    | 75HEI 01  |
| 8.8234            | 0.5651 | 41  | COUL   | 85ENG 01  | 71.4             | 2.16  |     | FAA    | 82FLA 01  |
| 9.16              | 0.07   | 41  | COUL   | 86CAH 01  | <u>K (ug/g)</u>  |       |     |        |           |
| 9.1673            | 0.0273 | 41  | COUL   | 85ENG 01  | 6900             |       |     | RR     | 73KAR 01  |
| <u>C-O (ug/g)</u> |        |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| 5600              | 1800   |     | CALC   | 86CAH 01  | 100              |       |     | OES    | 63CLA 01  |
| <u>C-T (%)</u>    |        |     |        |           | <u>Mg (%)</u>    |       |     |        |           |
| 9.72              | 0.17   |     | COUL   | 86CAH 01  | 1.29             |       |     | OES    | 78KNO 01  |
| 9.73              |        |     | CB     | 78TER 01  | 1.3              |       |     | OES    | 62JOE 01  |
| <u>Ca (%)</u>     |        |     |        |           | 1.37             |       |     | RR     | 73KAR 01  |
| 28.6              |        |     | OES    | 62JOE 01  | 1.39             |       |     | DCPES  | 73KAR 01  |
| 29.5              |        |     | RR     | 73KAR 01  | <u>Method</u>    |       |     |        |           |
| 29.6              |        |     | XRF    | 78KNO 01  | <u>Reference</u> |       |     |        |           |
| 29.7              |        |     | DCPES  | 73KAR 01  |                  |       |     |        |           |

TABLE 1A-2: INDIVIDUAL DATA FOR NBS SRM 1A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Si (%)</u>    |       |     |        |           |
| 320              |       |     | OES    | 78KNO 01  | 6.53             |       |     | XRF    | 78KNO 01  |
| 500              |       | 3   | OES    | 63CLA 01  | 6.54             |       |     | OES    | 62JOE 01  |
| 500              |       | 3   | OES    | 63CLA 01  | 6.58             |       |     | RR     | 73KAR 01  |
|                  |       |     |        |           | 6.63             |       |     | COLOR  | 74SHA 01  |
|                  |       |     |        |           | 6.72             |       |     | DCPES  | 73KAR 01  |
| <u>Mo (ug/g)</u> |       |     |        |           | <u>Sn (ug/g)</u> |       |     |        |           |
| <                | 1     | L   | OES    | 63CLA 01  |                  |       |     |        |           |
| <u>Na (ug/g)</u> |       |     |        |           | <u>Sr (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 1.68             |       |     | AA     | 82TER 01  |
|                  |       |     |        |           | 2.58             | 0.1   |     | FAA    | 85TER 01  |
| 2300             |       |     | RR     | 73KAR 01  |                  |       |     |        |           |
| 2700             |       |     | DCPES  | 73KAR 01  |                  |       |     |        |           |
| <u>Ni (ug/g)</u> |       |     |        |           | <u>Ti (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 1700             |       |     | OES    | 75THO 01  |
|                  |       |     |        |           | 1940             |       |     | OES    | 58GRA 01  |
| 10               |       |     | OES    | 63CLA 01  | 2000             |       | 3   | OES    | 63CLA 01  |
|                  |       |     |        |           | 2000             |       |     | RTNA   | 61TUR 01  |
| <u>P (ug/g)</u>  |       |     |        |           | <u>U (ug/g)</u>  |       |     |        |           |
|                  |       |     |        |           | 3000             |       | 3   | OES    | 63CLA 01  |
| 650              |       |     | WXRF   | 71FAB 01  |                  |       |     |        |           |
| 1500             |       |     | OES    | 78KNO 01  |                  |       |     |        |           |
| <u>Pb (ug/g)</u> |       |     |        |           | <u>V (ug/g)</u>  |       |     |        |           |
|                  |       |     |        |           | 900              |       |     | RR     | 73KAR 01  |
|                  |       |     |        |           | 900              |       |     | DCPES  | 73KAR 01  |
|                  |       |     |        |           | 960              | 61    |     | RTNA   | 65WAH 01  |
| 17.2             |       |     | FAA    | 75CAM 02  | 1000             |       |     | OES    | 78KNO 01  |
| 19.1             |       |     | AA     | 84TER 01  | 1500             |       | 3   | OES    | 63CLA 01  |
| 20               |       |     | OES    | 63CLA 01  | 2500             |       | 3   | OES    | 63CLA 01  |
| 21               |       |     | FAA    | 79HEI 03  |                  |       |     |        |           |
| <u>S (ug/g)</u>  |       |     |        |           | <u>Y (ug/g)</u>  |       |     |        |           |
|                  |       |     |        |           |                  |       |     |        |           |
| 2620             |       |     | CB     | 84LEC 02  | 155.75           | 1.86  |     | ICPES  | 83NOR 01  |
| 2700             |       |     | CB     | 55COL 01  |                  |       |     |        |           |
| 2800             |       |     | CB     | 74RUN 01  |                  |       |     |        |           |
| 2800             |       |     | OES    | 78KNO 01  | 30               |       |     | OES    | 63CLA 01  |
| 2800             |       |     | UU     | 72BOU 01  |                  |       |     |        |           |
| 3000             |       |     | TURB   | 73SHA 01  |                  |       |     |        |           |
| 3020             | 90    |     | CB     | 77LAN 01  |                  |       |     |        |           |
| 3073             |       |     | CB     | 78TER 01  |                  |       |     |        |           |
| <u>Sb (ng/g)</u> |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           |                  |       |     |        |           |
| 630              |       |     | HAA    | 84TER 04  | 17               |       |     | XRF    | 65BAL 01  |
|                  |       |     |        |           | 23.3             |       |     | RTNA   | 65BAL 01  |
| <u>Sc (ug/g)</u> |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           |                  |       |     |        |           |
| 15               |       |     | OES    | 63CLA 01  |                  |       |     |        |           |
|                  |       |     |        |           | 60               |       |     | OES    | 63CLA 01  |

TABLE 1B-1: COMPILED DATA FOR NBS SRM 1B ARGILLACEOUS LIMESTONE (revised 3/1/86)

| ELE | UNITS | NBS<br>Mean | CONSENSUS<br>Mean $\pm$ SD (n) | RANGE        | AA<br>Mean (n) | ICPES<br>Mean (n) | OES<br>Mean (n) | OTHER METHODS<br>Mean (n) Method |
|-----|-------|-------------|--------------------------------|--------------|----------------|-------------------|-----------------|----------------------------------|
| Ag  | ug/g  | ---         | < 5                            | ---          | ---            | < 5               | ---             | ---                              |
| Al  | ug/g  | 5920        | 5730 (2)                       | 5660 - 5800  | ---            | 5660 (1)          | 5800 (1)        | ---                              |
| As  | ug/g  | ---         | < 5                            | ---          | ---            | < 5               | ---             | ---                              |
| Au  | ug/g  | ---         | < 3                            | ---          | ---            | < 3               | ---             | ---                              |
| Ba  | ug/g  | ---         | 86 (1)                         | ---          | ---            | 86 (1)            | ---             | ---                              |
| Be  | ng/g  | ---         | 420 (1)                        | ---          | ---            | 420 (1)           | ---             | ---                              |
| Bi  | ug/g  | ---         | < 25                           | ---          | ---            | < 25              | ---             | ---                              |
| C-I | %     | 11.0        | ---                            | ---          | ---            | ---               | ---             | ---                              |
| Ca  | %     | 36.4        | 36.31 $\pm$ 0.44 (3)           | 35.93 - 36.8 | 36.2 (1)       | 35.93 (1)         | 36.8 (1)        | ---                              |
| Cd  | ng/g  | ---         | 41 (2)                         | 30 - 52      | 30 (1)         | ---               | ---             | 52 (1) IDMS                      |
| Ce  | ug/g  | ---         | 7.81 (1)                       | ---          | ---            | 7.81 (1)          | ---             | ---                              |
| Cl  | ug/g  | ---         | 70 (1)                         | ---          | ---            | ---               | ---             | 70 (1) XRF                       |
| Co  | ug/g  | ---         | 4.1 (1)                        | ---          | ---            | 4.1 (1)           | ---             | ---                              |
| Cr  | ug/g  | ---         | 15.7 (1)                       | ---          | ---            | 15.7 (1)          | ---             | ---                              |
| Cu  | ug/g  | ---         | 5.5 (1)                        | ---          | ---            | 5.5 (1)           | ---             | ---                              |
| Dy  | ug/g  | ---         | 0.9 (1)                        | ---          | ---            | 0.9 (1)           | ---             | ---                              |
| Er  | ng/g  | ---         | 570 (1)                        | ---          | ---            | 570 (1)           | ---             | ---                              |
| Eu  | ng/g  | ---         | 240 (1)                        | ---          | ---            | 240 (1)           | ---             | ---                              |
| F   | ug/g  | ---         | 1766 (1)                       | ---          | ---            | ---               | ---             | 1766 (1) XRF                     |
| Fe  | ug/g  | 5240        | 5320 $\pm$ 280 (3)             | 5000 - 5500  | 5500 (1)       | 5460 (1)          | 5000 (1)        | ---                              |
| Gd  | ug/g  | ---         | 0.97 (1)                       | ---          | ---            | 0.97 (1)          | ---             | ---                              |
| Hg  | ng/g  | ---         | 15.7 (1)                       | ---          | 15.7 (1)       | ---               | ---             | ---                              |
| Ho  | ng/g  | ---         | 200 (1)                        | ---          | ---            | 200 (1)           | ---             | ---                              |
| K   | ug/g  | 2100        | 2100 (2)                       | 2000 - 2200  | 2200 (1)       | 2000 (1)          | ---             | ---                              |
| LOI | %     | 41.1        | ---                            | ---          | ---            | ---               | ---             | ---                              |
| La  | ug/g  | ---         | 6.86 (1)                       | ---          | ---            | 6.86 (1)          | ---             | ---                              |
| Li  | ug/g  | ---         | < 2                            | ---          | ---            | < 2               | ---             | ---                              |
| Lu  | ng/g  | ---         | 80 (1)                         | ---          | ---            | 80 (1)            | ---             | ---                              |
| Mg  | ug/g  | 2170        | 2150 $\pm$ 220 (3)             | 2000 - 2400  | 2000 (1)       | 2040 (1)          | 2400 (1)        | ---                              |
| Mn  | ug/g  | 1550        | 1510 $\pm$ 85 (3)              | 1430 - 1600  | 1600 (1)       | 1510 (1)          | 1430 (1)        | ---                              |
| Mo  | ug/g  | ---         | < 3                            | ---          | ---            | < 3               | ---             | ---                              |
| Na  | ug/g  | 300         | 330 (2)                        | 260 - 400    | 400 (1)        | 260 (1)           | ---             | ---                              |
| Nd  | ug/g  | ---         | 4.88 (1)                       | ---          | ---            | 4.88 (1)          | ---             | ---                              |
| Ni  | ug/g  | ---         | 11 (1)                         | ---          | ---            | 11 (1)            | ---             | ---                              |
| P   | ug/g  | 350         | 370 (1)                        | ---          | ---            | 370 (1)           | ---             | ---                              |
| Pb  | ug/g  | ---         | 9.5 (2)                        | 2 - 17       | 2 (1)          | 17 (1)            | ---             | ---                              |
| Pr  | ug/g  | ---         | 1.18 (1)                       | ---          | ---            | 1.18 (1)          | ---             | ---                              |
| S   | ug/g  | ---         | 146 (2)                        | 100 - 192    | ---            | ---               | ---             | 192 (1) XRF                      |
| S   | ug/g  | ---         | ---                            | ---          | ---            | ---               | ---             | 100 (1) CB                       |
| Sb  | ug/g  | ---         | < 10                           | ---          | ---            | < 10              | ---             | ---                              |
| Se  | ug/g  | ---         | < 30                           | ---          | ---            | < 30              | ---             | ---                              |
| Si  | %     | 2.3         | 2.3 (2)                        | 2.28 - 2.32  | ---            | ---               | 2.32 (1)        | 2.28 (1) COLOR                   |
| Sm  | ug/g  | ---         | 0.89 (1)                       | ---          | ---            | 0.89 (1)          | ---             | ---                              |
| Sn  | ug/g  | ---         | < 3                            | ---          | ---            | < 3               | ---             | ---                              |
| Sr  | ug/g  | 1180        | 1170 $\pm$ 60 (3)              | 1100 - 1208  | 1100 (1)       | 1208 (1)          | 1200 (1)        | ---                              |
| Th  | ug/g  | ---         | < 25                           | ---          | ---            | 25                | ---             | ---                              |
| Ti  | ug/g  | 280         | 296 (2)                        | 292 - 300    | ---            | 292 (1)           | 300 (1)         | ---                              |
| U   | ug/g  | ---         | < 30                           | ---          | ---            | 30                | ---             | ---                              |
| V   | ug/g  | ---         | 29.45 (2)                      | 28.8 - 30.1  | ---            | 30.1 (1)          | 28.8 (1)        | ---                              |
| Y   | ug/g  | ---         | 7 (1)                          | ---          | ---            | 7 (1)             | ---             | ---                              |
| Yb  | ng/g  | ---         | 1325 (2)                       | 550 - 2100   | ---            | 1325 (2)          | ---             | ---                              |
| Zn  | ug/g  | ---         | 40.7 (1)                       | ---          | ---            | 40.7 (1)          | ---             | ---                              |
| Zr  | ug/g  | ---         | 16 (1)                         | ---          | ---            | 16 (1)            | ---             | ---                              |

TABLE 1B-2: INDIVIDUAL DATA FOR NBS SRM 1B (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ug/g)</u> |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| <                | 5     | L   | ICPES  | 81CHU 01  | 15.7             | 1     |     | ICPES  | 81CHU 01  |
| <u>Al (ug/g)</u> |       |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| 5660             | 200   |     | ICPES  | 81CHU 01  | 5.5              | 1     |     | ICPES  | 81CHU 01  |
| 5800             |       |     | OES    | 73BES 01  | <u>Dy (ug/g)</u> |       |     |        |           |
| <u>As (ug/g)</u> |       |     |        |           | 0.9              | 0.03  |     | ICPES  | 85JAR 02  |
| <                | 5     | L   | ICPES  | 81CHU 01  | <u>Er (ng/g)</u> |       |     |        |           |
| <u>Au (ug/g)</u> |       |     |        |           | 570              | 20    |     | ICPES  | 85JAR 02  |
| <                | 3     | L   | ICPES  | 81CHU 01  | <u>Eu (ng/g)</u> |       |     |        |           |
| <u>Ba (ug/g)</u> |       |     |        |           | 240              | 10    |     | ICPES  | 85JAR 02  |
| 86               | 1.7   |     | ICPES  | 81CHU 01  | 1700             | 1200  |     | ICPES  | 81CHU 01  |
| <u>Be (ng/g)</u> |       |     |        |           | <u>F (ug/g)</u>  |       |     |        |           |
| 420              | 50    |     | ICPES  | 81CHU 01  | 1766             |       |     | WXRF   | 82LEO 03  |
| <u>Bi (ug/g)</u> |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| <                | 25    | L   | ICPES  | 81CHU 01  | 5000             |       |     | OES    | 73BES 01  |
| <u>Ca (%)</u>    |       |     |        |           | 5460             | 140   |     | ICPES  | 81CHU 01  |
| 35.93            | 1.19  |     | ICPES  | 81CHU 01  | 5500             |       |     | AA     | 84SCH 01  |
| 36.2             |       |     | AA     | 84SCH 01  | <u>Gd (ug/g)</u> |       |     |        |           |
| 36.8             |       |     | OES    | 73BES 01  | <                | 5     | L   | ICPES  | 81CHU 01  |
| <u>Cd (ng/g)</u> |       |     |        |           | 0.97             | 0.05  |     | ICPES  | 85JAR 02  |
| <                | 2000  | L   | ICPES  | 81CHU 01  | <u>Hg (ng/g)</u> |       |     |        |           |
| 30               | 80    |     | AA     | 83GOG 01  | 15.7             | 0.9   |     | FAA    | 82FLA 01  |
| 52               |       |     | IDMS   | 74ROS 02  | <u>Ho (ng/g)</u> |       |     |        |           |
| <u>Ce (ug/g)</u> |       |     |        |           | 200              | 10    |     | ICPES  | 85JAR 02  |
| <                | 15    | L   | ICPES  | 81CHU 01  | <u>K (ug/g)</u>  |       |     |        |           |
| 7.81             | 0.48  |     | ICPES  | 85JAR 02  | 2000             | 50    |     | ICPES  | 81CHU 01  |
| <u>Cl (ug/g)</u> |       |     |        |           | 2200             |       |     | AA     | 84SCH 01  |
| 70               |       |     | WXRF   | 82LEO 03  | <u>La (ug/g)</u> |       |     |        |           |
| <u>Co (ug/g)</u> |       |     |        |           | <                | 5     | L   | ICPES  | 81CHU 01  |
| 4.1              | 1     |     | ICPES  | 81CHU 01  | 6.86             | 0.35  |     | ICPES  | 85JAR 02  |

TABLE 1B-2: INDIVIDUAL DATA FOR NBS SRM 1B (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Li (ug/g)</u> |       |     |        |           | <u>S (ug/g)</u>  |       |     |        |           |
| <                | 2     | L   | ICPES  | 81CHU 01  | 100              |       |     | CB     | 77LAN 01  |
|                  |       |     |        |           | 192              |       |     | WXRf   | 82LEO 03  |
| <u>Lu (ng/g)</u> |       |     |        |           | <u>Sb (ug/g)</u> |       |     |        |           |
| 80               | 10    |     | ICPES  | 85JAR 02  | <                | 10    | L   | ICPES  | 81CHU 01  |
| <u>Mg (ug/g)</u> |       |     |        |           | <u>Se (ug/g)</u> |       |     |        |           |
| 2000             |       |     | AA     | 84SCH 01  | <                | 30    | L   | ICPES  | 81CHU 01  |
| 2040             | 60    |     | ICPES  | 81CHU 01  |                  |       |     |        |           |
| 2400             |       |     | OES    | 73BES 01  | <u>Si (%)</u>    |       |     |        |           |
| <u>Mn (ug/g)</u> |       |     |        |           | 2.28             | 0.05  |     | COLOR  | 81FON 01  |
| 1430             |       |     | OES    | 73BES 01  | 2.32             |       |     | OES    | 73BES 01  |
| 1510             | 45    |     | ICPES  | 81CHU 01  | <u>Sm (ug/g)</u> |       |     |        |           |
| 1600             |       |     | AA     | 84SCH 01  | <                | 5     | L   | ICPES  | 81CHU 01  |
| <u>Mo (ug/g)</u> |       |     |        |           | 0.89             | 0.04  |     | ICPES  | 85JAR 02  |
| <                | 3     | L   | ICPES  | 81CHU 01  | <u>Sn (ug/g)</u> |       |     |        |           |
| <u>Na (ug/g)</u> |       |     |        |           | <                | 3     | L   | ICPES  | 81CHU 01  |
| 260              | 15    |     | ICPES  | 81CHU 01  | <u>Sr (ug/g)</u> |       |     |        |           |
| 400              |       |     | AA     | 84SCH 01  | 1100             |       |     | AA     | 84SCH 01  |
| <u>Nd (ug/g)</u> |       |     |        |           | 1200             |       |     | OES    | 75THO 01  |
| <                | 20    | L   | ICPES  | 81CHU 01  | 1208             | 24    |     | ICPES  | 81CHU 01  |
| 4.88             | 0.09  |     | ICPES  | 85JAR 02  | <u>Th (ug/g)</u> |       |     |        |           |
| <u>Ni (ug/g)</u> |       |     |        |           | <                | 25    | L   | ICPES  | 81CHU 01  |
| 11               | 1     |     | ICPES  | 81CHU 01  | <u>Ti (ug/g)</u> |       |     |        |           |
| <u>P (ug/g)</u>  |       |     |        |           | 292              | 6     |     | ICPES  | 81CHU 01  |
| 370              | 9     |     | ICPES  | 81CHU 01  | 300              |       |     | OES    | 73BES 01  |
| <u>Pb (ug/g)</u> |       |     |        |           | <u>U (ug/g)</u>  |       |     |        |           |
| 2                | 0.4   |     | FAA    | 75CAM 02  | <                | 30    | L   | ICPES  | 81CHU 01  |
| 17               | 2     |     | ICPES  | 81CHU 01  | <u>V (ug/g)</u>  |       |     |        |           |
| <u>Pr (ug/g)</u> |       |     |        |           | 28.8             |       |     | OES    | 84PLS 01  |
| 1.18             | 0.03  |     | ICPES  | 85JAR 02  | 30.1             | 1.4   |     | ICPES  | 81CHU 01  |

TABLE 1B-2: INDIVIDUAL DATA FOR NBS SRM 1B (cont.)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|
| <u>Y (ug/g)</u>  |              |            |               |                  |
| 7                | 0.34         |            | ICPES         | 85JAR 02         |
| <u>Yb (ng/g)</u> |              |            |               |                  |
| 550              | 20           |            | ICPES         | 85JAR 02         |
| 2100             | 100          |            | ICPES         | 81CHU 01         |
| <u>Zn (ug/g)</u> |              |            |               |                  |
| 40.7             | 2            |            | ICPES         | 81CHU 01         |
| <u>Zr (ug/g)</u> |              |            |               |                  |
| 16               | 1            |            | ICPES         | 81CHU 01         |

TABLE 1C-1: COMPILED DATA FOR NBS SRM 1C ARGILLACEOUS LIMESTONE (revised 3/1/86)

| ELEMENT | UNITS | NBS              | CONSENSUS | RANGE      | NAA      | ICPES    | OTHER METHODS   |
|---------|-------|------------------|-----------|------------|----------|----------|-----------------|
|         |       | Mean $\pm$ SD    | Mean (n)  |            | Mean (n) | Mean (n) | Mean (n) Method |
| Al      | ug/g  | 6880 $\pm$ 160   | ---       | ---        | ---      | ---      | ---             |
| Ba      | ug/g  | ---              | 84 (1)    | ---        | 84 (1)   | ---      | ---             |
| Ca      | %     | 35.96 $\pm$ 0.21 | ---       | ---        | ---      | ---      | ---             |
| Cd      | ng/g  | ---              | 400 (1)   | ---        | ---      | 400 (1)  | ---             |
| Ce      | ug/g  | ---              | 7.14 (2)  | 6.87 - 7.4 | 7.4 (1)  | 6.87 (1) | ---             |
| Co      | ug/g  | ---              | 1.15 (1)  | ---        | 1.15 (1) | ---      | ---             |
| Cr      | ug/g  | ---              | 19 (1)    | ---        | 19 (1)   | ---      | ---             |
| Cs      | ng/g  | ---              | 590 (1)   | ---        | 590 (1)  | ---      | ---             |
| Dy      | ng/g  | ---              | 640 (1)   | ---        | ---      | 640 (1)  | ---             |
| Er      | ng/g  | ---              | 410 (1)   | ---        | ---      | 410 (1)  | ---             |
| Eu      | ng/g  | ---              | 165 (2)   | 160 - 170  | 170 (1)  | 160 (1)  | ---             |
| Fe      | ug/g  | 3840 $\pm$ 210   | 3900 (1)  | ---        | 3900 (1) | ---      | ---             |
| Gd      | ng/g  | ---              | 650 (1)   | ---        | ---      | 650 (1)  | ---             |
| Hf      | ng/g  | ---              | 750 (1)   | ---        | 750 (1)  | ---      | ---             |
| Ho      | ng/g  | ---              | 140 (1)   | ---        | ---      | 140 (1)  | ---             |
| K       | ug/g  | 2320 $\pm$ 80    | ---       | ---        | ---      | ---      | ---             |
| LOI     | %     | 39.9 $\pm$ 0.1   | ---       | ---        | ---      | ---      | ---             |
| La      | ug/g  | ---              | 4.63 (2)  | 4.26 - 5   | 5 (1)    | 4.26 (1) | ---             |
| Lu      | ng/g  | ---              | 60 (2)    | ---        | 60 (1)   | 60 (1)   | ---             |
| Mg      | ug/g  | 2530 $\pm$ 240   | ---       | ---        | ---      | ---      | ---             |
| Mn      | ug/g  | 190 $\pm$ 40     | ---       | ---        | ---      | ---      | ---             |
| Na      | ug/g  | 150 $\pm$ 75     | ---       | ---        | ---      | ---      | ---             |
| Nd      | ug/g  | ---              | 3.72 (2)  | 3.7 - 3.73 | 3.7 (1)  | 3.73 (1) | ---             |
| P       | ug/g  | 175 $\pm$ 44     | 165 (2)   | 160 - 170  | ---      | 170 (1)  | 160 (1) COLOR   |
| Pr      | ug/g  | ---              | 0.9 (1)   | ---        | ---      | 0.9 (1)  | ---             |
| Rb      | ug/g  | ---              | 12.5 (1)  | ---        | 12.5 (1) | ---      | ---             |
| Sc      | ug/g  | ---              | 1.3 (1)   | ---        | 1.3 (1)  | ---      | ---             |
| Si      | %     | 3.19 $\pm$ 0.04  | ---       | ---        | ---      | ---      | ---             |
| Sm      | ng/g  | ---              | 730 (2)   | ---        | 730 (1)  | 730 (1)  | ---             |
| Sr      | ug/g  | 250 $\pm$ 40     | ---       | ---        | ---      | ---      | ---             |
| Ta      | ng/g  | ---              | 90 (1)    | ---        | 90 (1)   | ---      | ---             |
| Tb      | ng/g  | ---              | 130 (1)   | ---        | 130 (1)  | ---      | ---             |
| Th      | ug/g  | ---              | 1.02 (1)  | ---        | 1.02 (1) | ---      | ---             |
| Ti      | ug/g  | 420 $\pm$ 60     | ---       | ---        | ---      | ---      | ---             |
| Tm      | ng/g  | ---              | 70 (1)    | ---        | 70 (1)   | ---      | ---             |
| U       | ug/g  | ---              | 1.5 (1)   | ---        | 1.5 (1)  | ---      | ---             |
| Y       | ug/g  | ---              | 5.05 (1)  | ---        | ---      | 5.05 (1) | ---             |
| Yb      | ng/g  | ---              | 385 (2)   | 380 - 390  | 380 (1)  | 390 (1)  | ---             |

TABLE 1C-2: INDIVIDUAL DATA FOR NBS SRM 1C (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer  | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|--------|-----|--------|-----------|
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Ho (ng/g)</u> |        |     |        |           |
| 84               |       |     | ITNA   | 85POT 02  | 140              | 10     |     | ICPES  | 85JAR 02  |
| <u>Cd (ng/g)</u> |       |     |        |           | <u>La (ug/g)</u> |        |     |        |           |
| < 500            |       |     | FAA    | 83UCH 02  | 4.26             | 0.1    |     | ICPES  | 85JAR 02  |
| 400              | 38    |     | ICPES  | 83UCH 02  | 5                |        |     | ITNA   | 85POT 02  |
| <u>Ce (ug/g)</u> |       |     |        |           | <u>Lu (ng/g)</u> |        |     |        |           |
| 6.87             | 0.14  |     | ICPES  | 85JAR 02  | 60               |        |     | ICPES  | 85JAR 02  |
| 7.4              |       |     | ITNA   | 85POT 02  | 60               |        |     | ITNA   | 85POT 02  |
| <u>Co (ug/g)</u> |       |     |        |           | <u>Nd (ug/g)</u> |        |     |        |           |
| 1.15             |       |     | ITNA   | 85POT 02  | 3.7              |        |     | ITNA   | 85POT 02  |
|                  |       |     |        |           | 3.73             | 0.05   |     | ICPES  | 85JAR 02  |
| <u>Cr (ug/g)</u> |       |     |        |           | <u>P (%)</u>     |        |     |        |           |
| 19               |       |     | ITNA   | 85POT 02  | 0.016            | 0.0002 |     | COLOR  | 83UCH 01  |
|                  |       |     |        |           | 0.017            | 0.0001 |     | ICPES  | 83UCH 01  |
| <u>Cs (ng/g)</u> |       |     |        |           | <u>Pr (ug/g)</u> |        |     |        |           |
| 590              |       |     | ITNA   | 85POT 02  | 0.9              | 0.02   |     | ICPES  | 85JAR 02  |
| <u>Dy (ng/g)</u> |       |     |        |           | <u>Rb (ug/g)</u> |        |     |        |           |
| 640              | 10    |     | ICPES  | 85JAR 02  | 12.5             |        |     | ITNA   | 85POT 02  |
| <u>Er (ng/g)</u> |       |     |        |           | <u>Sc (ug/g)</u> |        |     |        |           |
| 410              | 20    |     | ICPES  | 85JAR 02  | 1.3              |        |     | ITNA   | 85POT 02  |
| <u>Eu (ng/g)</u> |       |     |        |           | <u>Sm (ng/g)</u> |        |     |        |           |
| 160              |       |     | ICPES  | 85JAR 02  | 730              |        |     | ITNA   | 85POT 02  |
| 170              |       |     | ITNA   | 85POT 02  | 730              | 20     |     | ICPES  | 85JAR 02  |
| <u>Fe (ug/g)</u> |       |     |        |           | <u>Ta (ng/g)</u> |        |     |        |           |
| 3900             |       |     | ITNA   | 85POT 02  | 90               |        |     | ITNA   | 85POT 02  |
| <u>Gd (ng/g)</u> |       |     |        |           | <u>Tb (ng/g)</u> |        |     |        |           |
| 650              | 10    |     | ICPES  | 85JAR 02  | 130              |        |     | ITNA   | 85POT 02  |
| <u>Hf (ng/g)</u> |       |     |        |           | <u>Th (ug/g)</u> |        |     |        |           |
| 750              |       |     | ITNA   | 85POT 02  | 1.02             |        |     | ITNA   | 85POT 02  |

TABLE 1C-2: INDIVIDUAL DATA FOR NBS SRM 1C (cont.)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|
| <u>Tm (ng/g)</u> |              |            |               |                  |
| 70               |              |            | ITNA          | 85POT 02         |
| <u>U (ug/g)</u>  |              |            |               |                  |
| 1.5              |              |            | ITNA          | 85POT 02         |
| <u>Y (ug/g)</u>  |              |            |               |                  |
| 5.05             | 0.02         |            | ICPES         | 85JAR 02         |
| <u>Yb (ng/g)</u> |              |            |               |                  |
| 380              |              |            | ITNA          | 85POT 02         |
| 390              | 10           |            | ICPES         | 85JAR 02         |

TABLE 27F-1: COMPILED DATA FOR NBS SRM 27F SIBLEY IRON ORE  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean | METHOD |
|---------|-------|----------------------|-------------------|--------|
| Al      | ug/g  | 4340 $\pm$ 160       | ---               | ---    |
| Bi      | ng/g  | ---                  | 150 (1)           | AA     |
| Ca      | ug/g  | 280 $\pm$ 20         | ---               | ---    |
| Fe      | %     | 65.97 $\pm$ 0.05     | ---               | ---    |
| K       | ug/g  | 66 $\pm$ 17          | ---               | ---    |
| Mg      | ug/g  | 115 $\pm$ 25         | ---               | ---    |
| Mn      | ug/g  | 85 $\pm$ 15          | ---               | ---    |
| Na      | ug/g  | 89 $\pm$ 22          | ---               | ---    |
| P       | ug/g  | 410 $\pm$ 10         | ---               | ---    |
| S       | ug/g  | 50 $\pm$ 10          | ---               | ---    |
| Si      | %     | 1.95 $\pm$ 0.02      | ---               | ---    |
| Ti      | ug/g  | 110 $\pm$ 11         | ---               | ---    |

TABLE 27F-2: INDIVIDUAL DATA FOR NBS SRM 27F  
(revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|
| <u>Bi (ng/g)</u> |       |     |        |           |
| 150              |       |     | FAA    | 84TER 03  |

TABLE 28-1: COMPILED DATA FOR NBS SRM 28 NORRIE IRON ORE  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean | METHOD |
|---------|-------|-------------|-------------------|--------|
| Mn      | ug/g  | 4400        | ---               | ---    |

TABLE 56-1: COMPILED DATA FOR NBS SRM 56 PHOSPHATE ROCK  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean | METHOD |
|---------|-------|-------------|-------------------|--------|
| Al      | %     | 1.62        | ---               | ---    |
| Ca      | %     | 32          | ---               | ---    |
| Fe      | %     | 2.31        | ---               | ---    |
| P       | %     | 13.66       | ---               | ---    |
| S       | %     | ---         | 2.5 (1)           | TURB   |

TABLE 56-2: INDIVIDUAL DATA FOR NBS SRM 56  
(revised 3/1/86)

| Conc         | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|
| <u>S (%)</u> |       |     |        |           |
| 2.5          |       |     | TURB   | 73SHA 01  |

TABLE 56B-1: COMPILED DATA FOR NBS SRM 56B PHOSPHATE ROCK  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean | METHOD |
|---------|-------|-------------|-------------------|--------|
| Ca      | %     | 31.5        | ---               | ---    |
| F       | %     | 3.4         | 3.32 (2)          | ISE    |
| P       | %     | 13.76       | ---               | ---    |
| Si      | %     | 4.72        | 4.8 (1)           | AA     |

TABLE 56B-2: INDIVIDUAL DATA FOR NBS SRM 56B  
(revised 3/1/86)

| Conc          | Uncer | Com | Method | Reference |
|---------------|-------|-----|--------|-----------|
| <u>F (%)</u>  |       |     |        |           |
| 3.25          |       | 11  | ISE    | 71PET 01  |
| 3.38          |       | 11  | ISE    | 71PET 01  |
| <u>Si (%)</u> |       |     |        |           |
| 4.8           | 0.05  |     | AA     | 82KIS 01  |

TABLE 69A-1: COMPILED DATA FOR NBS SRM 69A BAUXITE ORE (revised 3/1/86)

| ELE | UNITS | NBS   | CONSENSUS       |     | MEDIAN | RANGE         | AA       |                  | XRF           |           | OTHER METHODS |        |
|-----|-------|-------|-----------------|-----|--------|---------------|----------|------------------|---------------|-----------|---------------|--------|
|     |       | Mean  | Mean $\pm$ SD   | (n) |        |               | Mean     | (n)              | Mean $\pm$ SD | (n)       | Mean (n)      | Method |
| Al  | %     | 29.1  | 29.5 $\pm$ 0.4  | (7) | 29.2   | 29.17 - 30.20 | 29.2 (2) | 29.68 $\pm$ 0.41 | (4)           | 29.17 (1) | TITR          |        |
| As  | ug/g  | ---   | 12.4            | (2) | ---    | 12.2 - 12.7   | 12.7 (1) | 12.2             | (1)           | ---       |               |        |
| Ba  | ug/g  | 90    | 73              | (1) | ---    | ---           | ---      | 73               | (1)           | ---       |               |        |
| Be  | ng/g  | ---   | 200             | (1) | ---    | ---           | 200 (1)  | ---              |               | ---       |               |        |
| Bi  | ng/g  | ---   | 668             | (1) | ---    | ---           | 668 (1)  | ---              |               | ---       |               |        |
| Ca  | ug/g  | 2100  | 1980 $\pm$ 80   | (5) | 1900   | 1900 - 2100   | 1900 (1) | 2000             | (1)           | 1900 (1)  | OES           |        |
| Ca  | ug/g  | ---   | ---             |     | ---    | ---           | ---      | ---              |               | 2050 (2)  | TITR          |        |
| Cd  | ng/g  | ---   | 20              | (1) | ---    | ---           | 20 (1)   | ---              |               | ---       |               |        |
| Ce  | ug/g  | ---   | 94              | (1) | ---    | ---           | ---      | 94               | (1)           | ---       |               |        |
| Cl  | ug/g  | ---   | 117             | (1) | ---    | ---           | ---      | 117              | (1)           | ---       |               |        |
| Co  | ug/g  | ---   | 3.5             | (1) | ---    | ---           | ---      | 3.5              | (1)           | ---       |               |        |
| Cr  | ug/g  | 340   | 270             | (1) | ---    | ---           | ---      | ---              |               | 270 (1)   | OES           |        |
| Cu  | ug/g  | ---   | 9               | (1) | ---    | ---           | ---      | 9                | (1)           | ---       |               |        |
| Dy  | ug/g  | ---   | 4.5             | (1) | ---    | ---           | ---      | 4.5              | (1)           | ---       |               |        |
| F   | ug/g  | ---   | 1490            | (1) | ---    | ---           | ---      | 1490             | (1)           | ---       |               |        |
| Fe  | %     | 4.07  | 3.99 $\pm$ 0.12 | (6) | 3.9    | 3.82 - 4.12   | 3.96 (1) | 3.93 $\pm$ 0.14  | (3)           | 4.12 (1)  | OES           |        |
| Fe  | %     | ---   | ---             |     | ---    | ---           | ---      | ---              |               | 4.07 (1)  | TITR          |        |
| Ga  | ug/g  | ---   | 119             | (1) | ---    | ---           | ---      | 119              | (1)           | ---       |               |        |
| Gd  | ug/g  | ---   | 3.2             | (1) | ---    | ---           | ---      | 3.2              | (1)           | ---       |               |        |
| Hf  | ug/g  | ---   | 33              | (1) | ---    | ---           | ---      | 33               | (1)           | ---       |               |        |
| K   | ug/g  | < 80  | 75              | (2) | ---    | 70 - 80       | ---      | 75               | (2)           | ---       |               |        |
| LOI | %     | 29.55 | ---             |     | ---    | ---           | ---      | ---              |               | ---       |               |        |
| La  | ug/g  | ---   | 71              | (1) | ---    | ---           | ---      | 71               | (1)           | ---       |               |        |
| Mg  | ug/g  | 120   | 75              | (2) | ---    | 60 - 90       | 90 (1)   | ---              |               | 60 (1)    | OES           |        |
| Mn  | ug/g  | < 80  | 23              | (1) | ---    | ---           | ---      | 23               | (1)           | ---       |               |        |
| Na  | ug/g  | < 80  | ---             |     | ---    | ---           | ---      | ---              |               | ---       |               |        |
| Nb  | ug/g  | ---   | 59              | (1) | ---    | ---           | ---      | 59               | (1)           | ---       |               |        |
| Nd  | ug/g  | ---   | 28              | (1) | ---    | ---           | ---      | 28               | (1)           | ---       |               |        |
| P   | ug/g  | 350   | 510             | (2) | ---    | 220 - 800     | ---      | 220              | (1)           | 800 (1)   | OES           |        |
| Pb  | ug/g  | ---   | 34              | (2) | ---    | 31 - 37       | 30.8 (1) | 37               | (1)           | ---       |               |        |
| Pr  | ug/g  | ---   | 5.4             | (1) | ---    | ---           | ---      | 5.4              | (1)           | ---       |               |        |
| S   | ug/g  | 160   | 300 $\pm$ 80    | (4) | 300    | 200 - 400     | ---      | 358              | (2)           | 200 (1)   | OES           |        |
| S   | ug/g  | ---   | ---             |     | ---    | ---           | ---      | ---              |               | 300 (1)   | TURB          |        |
| Sb  | ug/g  | ---   | 2.0             | (2) | ---    | 1.0 - 3.1     | 1.0 (1)  | 3.1              | (1)           | ---       |               |        |
| Sc  | ug/g  | ---   | 8.9             | (1) | ---    | ---           | ---      | 8.9              | (1)           | ---       |               |        |
| Si  | %     | 2.81  | 2.82 $\pm$ 0.03 | (5) | 2.8    | 2.78 - 2.85   | 2.85 (2) | 2.8 $\pm$ 0.02   | (3)           | ---       |               |        |
| Sm  | ug/g  | ---   | 5.1             | (1) | ---    | ---           | ---      | 5.1              | (1)           | ---       |               |        |
| Sn  | ug/g  | ---   | 8.2             | (2) | ---    | 8.0 - 8.5     | 8.51 (1) | 8                | (1)           | ---       |               |        |
| Sr  | ug/g  | ---   | 49              | (1) | ---    | ---           | ---      | 49               | (1)           | ---       |               |        |
| Th  | ug/g  | ---   | 94              | (1) | ---    | ---           | ---      | 94               | (1)           | ---       |               |        |
| Ti  | %     | 1.66  | 1.62 $\pm$ 0.11 | (7) | 1.64   | 1.46 - 1.74   | 1.46 (2) | 1.68 $\pm$ 0.04  | (4)           | 1.7 (1)   | OES           |        |
| U   | ug/g  | ---   | 6.2             | (1) | ---    | ---           | ---      | 6.2              | (1)           | ---       |               |        |
| V   | ug/g  | 170   | ---             |     | ---    | ---           | ---      | ---              |               | ---       |               |        |
| Y   | ug/g  | ---   | 16              | (1) | ---    | ---           | ---      | 16               | (1)           | ---       |               |        |
| Zn  | ug/g  | ---   | 11              | (1) | ---    | ---           | ---      | 11               | (1)           | ---       |               |        |
| Zr  | ug/g  | 1330  | 1285            | (1) | ---    | ---           | ---      | 1285             | (1)           | ---       |               |        |

TABLE 69A-2: INDIVIDUAL DATA FOR NBS SRM 69A (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>    |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| 29.17            |       |     | TITR   | 58WAT 01  | 270              |       |     | OES    | 78KNO 01  |
| 29.2             |       |     | XRF    | 78KNO 01  | <u>Cu (ug/g)</u> |       |     |        |           |
| 29.2             | 1.04  |     | AA     | 79BRE 02  | 9                |       |     | XRF    | 76LEO 02  |
| 29.2             | 1.04  |     | AA     | 80LAB 03  | <u>Dy (ug/g)</u> |       |     |        |           |
| 29.64            |       |     | XRF    | 79SCH 02  | 4.5              |       |     | XRF    | 76LEO 02  |
| 29.68            | 0.07  |     | XRF    | 80LAB 03  | <u>F (ug/g)</u>  |       |     |        |           |
| 30.2             |       |     | EXRF   | 80DAL 01  | 1490             |       |     | WXRF   | 82LEO 03  |
| <u>As (ug/g)</u> |       |     |        |           | <u>Fe (%)</u>    |       |     |        |           |
| 12.2             |       |     | XRF    | 76LEO 02  | 3.82             | 0.08  |     | XRF    | 80LAB 03  |
| 12.7             |       |     | HAA    | 84TER 04  | 3.88             |       |     | XRF    | 79SCH 02  |
| <u>Ba (ug/g)</u> |       |     |        |           | 3.96             | 0.03  |     | AA     | 80LAB 03  |
| 73               |       |     | XRF    | 76LEO 02  | 4.07             |       |     | TITR   | 69WIC 01  |
| <u>Be (ng/g)</u> |       |     |        |           | 4.09             |       |     | EXRF   | 80DAL 01  |
| 200              |       |     | AA     | 82TER 02  | 4.12             |       |     | OES    | 78KNO 01  |
| 200              |       | D   | AA     | 83TER 01  | <u>Ga (ug/g)</u> |       |     |        |           |
| <u>Bi (ng/g)</u> |       |     |        |           | 119              |       |     | XRF    | 76LEO 02  |
| 668              |       |     | HAA    | 84TER 02  | <u>Gd (ug/g)</u> |       |     |        |           |
| 668              |       | D   | FAA    | 84TER 03  | 3.2              |       |     | XRF    | 76LEO 02  |
| <u>Ca (ug/g)</u> |       |     |        |           | <u>Hf (ug/g)</u> |       |     |        |           |
| 1100             |       | 11  | AA     | 79MEN 01  | 33               |       |     | XRF    | 76LEO 02  |
| 1900             |       | 11  | AA     | 79MEN 01  | <u>K (ug/g)</u>  |       |     |        |           |
| 1900             |       |     | OES    | 78KNO 01  | 70               |       |     | EXRF   | 80DAL 01  |
| 2000             |       |     | TITR   | 80HIT 02  | 80               |       |     | XRF    | 78KNO 01  |
| 2000             |       |     | EXRF   | 80DAL 01  | <u>La (ug/g)</u> |       |     |        |           |
| 2100             |       |     | TITR   | 79MEN 01  | 71               |       |     | XRF    | 76LEO 02  |
| <u>Cd (ng/g)</u> |       |     |        |           | <u>Mg (ug/g)</u> |       |     |        |           |
| 20               |       |     | AA     | 84TER 01  | 60               |       |     | OES    | 78KNO 01  |
| <u>Ce (ug/g)</u> |       |     |        |           | 90               |       |     | AA     | 79MEN 01  |
| 94               |       |     | XRF    | 76LEO 02  | <u>Cl (ug/g)</u> |       |     |        |           |
| <u>Cl (ug/g)</u> |       |     |        |           | 117              |       |     | WXRF   | 82LEO 03  |
| 117              |       |     | WXRF   | 82LEO 03  | <u>Co (ug/g)</u> |       |     |        |           |
| <u>Co (ug/g)</u> |       |     |        |           | 3.5              |       |     | XRF    | 76LEO 02  |
| 3.5              |       |     | XRF    | 76LEO 02  |                  |       |     |        |           |

TABLE 69A-2: INDIVIDUAL DATA FOR NBS SRM 69A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Sm (ug/g)</u> |       |     |        |           |
| <                | 100   | L   | OES    | 78KNO 01  | 5.1              |       |     | XRF    | 76LEO 02  |
| 23               |       |     | EXRF   | 80DAL 01  |                  |       |     |        |           |
| <u>Nb (ug/g)</u> |       |     |        |           | <u>Sn (ug/g)</u> |       |     |        |           |
| 59               |       |     | XRF    | 76LEO 02  | 8                |       |     | XRF    | 76LEO 02  |
|                  |       |     |        |           | 8.51             | 0.4   |     | FAA    | 85TER 01  |
| <u>Nd (ug/g)</u> |       |     |        |           | <u>Sr (ug/g)</u> |       |     |        |           |
| 28               |       |     | XRF    | 76LEO 02  | 49               |       |     | XRF    | 76LEO 02  |
| <u>P (ug/g)</u>  |       |     |        |           | <u>Th (ug/g)</u> |       |     |        |           |
| 220              |       |     | EXRF   | 80DAL 01  | 94               |       |     | XRF    | 76LEO 02  |
| 800              |       |     | OES    | 78KNO 01  |                  |       |     |        |           |
| <u>Pb (ug/g)</u> |       |     |        |           | <u>Ti (%)</u>    |       |     |        |           |
| 30.8             |       |     | AA     | 84TER 01  | 1.32             | 0.11  |     | COLOR  | 79BRE 01  |
| 37               |       |     | XRF    | 76LEO 02  | 1.46             | 0.14  |     | AA     | 79BRE 01  |
|                  |       |     |        |           | 1.46             | 0.14  |     | AA     | 80LAB 03  |
|                  |       |     |        |           | 1.64             | 0.02  |     | XRF    | 80LAB 03  |
|                  |       |     |        |           | 1.66             |       |     | XRF    | 79SCH 02  |
|                  |       |     |        |           | 1.66             | 0.01  |     | XRF    | 79BRE 01  |
|                  |       |     |        |           | 1.7              |       |     | OES    | 78KNO 01  |
|                  |       |     |        |           | 1.74             |       |     | EXRF   | 80DAL 01  |
| <u>Pr (ug/g)</u> |       |     |        |           | <u>U (ug/g)</u>  |       |     |        |           |
| 5.4              |       |     | XRF    | 76LEO 02  | 6.2              |       |     | XRF    | 76LEO 02  |
| <u>S (ug/g)</u>  |       |     |        |           | <u>Y (ug/g)</u>  |       |     |        |           |
| 200              |       |     | OES    | 78KNO 01  | 16               |       |     | XRF    | 76LEO 02  |
| 300              |       |     | TURB   | 73SHA 01  |                  |       |     |        |           |
| 317              |       |     | WXRF   | 82LEO 03  |                  |       |     |        |           |
| 400              |       |     | EXRF   | 80DAL 01  |                  |       |     |        |           |
| <u>Sb (ug/g)</u> |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 1                |       |     | HAA    | 84TER 04  | 11               |       |     | XRF    | 76LEO 02  |
| 3.1              |       |     | XRF    | 76LEO 02  |                  |       |     |        |           |
| <u>Sc (ug/g)</u> |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
| 8.9              |       |     | XRF    | 76LEO 02  | 1285             |       |     | XRF    | 76LEO 02  |
| <u>Si (%)</u>    |       |     |        |           |                  |       |     |        |           |
| 2.44             |       |     | EXRF   | 80DAL 01  |                  |       |     |        |           |
| 2.78             |       |     | XRF    | 78KNO 01  |                  |       |     |        |           |
| 2.8              |       |     | XRF    | 79SCH 02  |                  |       |     |        |           |
| 2.82             | 0.04  |     | XRF    | 80LAB 03  |                  |       |     |        |           |
| 2.85             | 0.08  |     | AA     | 80LAB 03  |                  |       |     |        |           |
| 2.85             | 0.08  |     | AA     | 79BRE 02  |                  |       |     |        |           |

TABLE 69B-1: COMPILED DATA FOR NBS SRM 69B BAUXITE ORE  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean $\pm$ SD |
|---------|-------|----------------------|
| Al      | %     | 25.8 $\pm$ 0.1       |
| Ba      | ug/g  | 72                   |
| Ca      | ug/g  | .930 $\pm$ 140       |
| Ce      | ug/g  | 240                  |
| Co      | ug/g  | 1                    |
| Cr      | ug/g  | 75 $\pm$ 14          |
| Fe      | %     | 4.99 $\pm$ 0.08      |
| Hf      | ug/g  | 63                   |
| K       | ug/g  | 560 $\pm$ 75         |
| LOI     | %     | 27.2 $\pm$ 0.2       |
| Mg      | ug/g  | 510 $\pm$ 50         |
| Mn      | ug/g  | 850 $\pm$ 40         |
| Na      | ug/g  | 180                  |
| P       | ug/g  | 514 $\pm$ 17         |
| S       | ug/g  | 2500 $\pm$ 80        |
| Sc      | ug/g  | 8                    |
| Si      | %     | 6.27 $\pm$ 0.05      |
| Ti      | %     | 1.14 $\pm$ 0.03      |
| V       | ug/g  | 160 $\pm$ 20         |
| Zn      | ug/g  | 28 $\pm$ 4           |
| Zr      | ug/g  | 2150 $\pm$ 520       |

TABLE 70-1: COMPILED DATA FOR NBS SRM 70 POTASH FELDSPAR (revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean $\pm$ SD (n) | MEDIAN | RANGE     | METHOD  |
|---------|-------|-------------|--------------------------------|--------|-----------|---------|
| Al      | %     | 9.54        | ---                            | ---    | ---       | ---     |
| Ba      | ug/g  | 300         | 380 (1)                        | ---    | ---       | NAA     |
| Ca      | ug/g  | 500         | ---                            | ---    | ---       | ---     |
| Ce      | ug/g  | ---         | < 4                            | ---    | ---       | NAA     |
| Co      | ng/g  | ---         | 100 (1)                        | ---    | ---       | NAA     |
| Cr      | ug/g  | ---         | < 2                            | ---    | ---       | NAA     |
| Cs      | ug/g  | ---         | 6.6 (1)                        | ---    | ---       | NAA     |
| Eu      | ng/g  | ---         | 400 (1)                        | ---    | ---       | NAA     |
| Fe      | ug/g  | 210         | 300 (1)                        | ---    | ---       | NAA     |
| Hf      | ng/g  | ---         | < 200                          | ---    | ---       | NAA     |
| Hg      | ng/g  | ---         | 98 (1)                         | ---    | ---       | AA      |
| K       | %     | 10.44       | ---                            | ---    | ---       | ---     |
| LOI     | %     | 0.22        | ---                            | ---    | ---       | ---     |
| La      | ug/g  | ---         | < 3                            | ---    | ---       | NAA     |
| Lu      | ng/g  | ---         | < 40                           | ---    | ---       | NAA     |
| Mg      | ug/g  | 78          | ---                            | ---    | ---       | ---     |
| Mn      | ug/g  | 7           | ---                            | ---    | ---       | ---     |
| Na      | %     | 1.76        | ---                            | ---    | ---       | ---     |
| Nd      | ug/g  | ---         | < 3                            | ---    | ---       | NAA     |
| P       | ug/g  | 52          | ---                            | ---    | ---       | ---     |
| Rb      | ug/g  | ---         | 470 (1)                        | ---    | ---       | NAA     |
| Sb      | ng/g  | ---         | < 500                          | ---    | ---       | NAA     |
| Sc      | ng/g  | ---         | 40 (1)                         | ---    | ---       | NAA     |
| Si      | %     | 31.13       | ---                            | ---    | ---       | ---     |
| Sm      | ng/g  | ---         | < 500                          | ---    | ---       | NAA     |
| Ta      | ng/g  | ---         | < 200                          | ---    | ---       | NAA     |
| Tb      | ng/g  | ---         | < 200                          | ---    | ---       | NAA     |
| Th      | ng/g  | ---         | < 400                          | ---    | ---       | NAA     |
| Ti      | ug/g  | 12          | ---                            | ---    | ---       | ---     |
| Yb      | ng/g  | ---         | < 300                          | ---    | ---       | NAA     |
| Zn      | ug/g  | ---         | 6.9 $\pm$ 0.8 (3)              | 7.3    | 6.0 - 7.5 | NAA/XRF |
| Zr      | ug/g  | ---         | < 75                           | ---    | ---       | NAA     |

TABLE 70-2: INDIVIDUAL DATA FOR NBS SRM 70 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Sb (ng/g)</u> |       |     |        |           |
| 380              | 17    |     | ITNA   | 77FLA 01  | <                | 500   | L   | ITNA   | 77FLA 01  |
| <u>Ce (ug/g)</u> |       |     |        |           | <u>Sc (ng/g)</u> |       |     |        |           |
| <                | 4     | L   | ITNA   | 77FLA 01  | 40               | 3     |     | ITNA   | 77FLA 01  |
| <u>Co (ng/g)</u> |       |     |        |           | <u>Sm (ng/g)</u> |       |     |        |           |
| 100              |       |     | ITNA   | 77FLA 01  | <                | 500   | L   | ITNA   | 77FLA 01  |
| <u>Cr (ug/g)</u> |       |     |        |           | <u>Ta (ng/g)</u> |       |     |        |           |
| <                | 2     | L   | ITNA   | 77FLA 01  | <                | 200   | L   | ITNA   | 77FLA 01  |
| <u>Cs (ug/g)</u> |       |     |        |           | <u>Tb (ng/g)</u> |       |     |        |           |
| 6.6              | 0.19  |     | ITNA   | 77FLA 01  | <                | 200   | L   | ITNA   | 77FLA 01  |
| <u>Eu (ng/g)</u> |       |     |        |           | <u>Th (ng/g)</u> |       |     |        |           |
| 400              | 10    |     | ITNA   | 77FLA 01  | <                | 400   | L   | ITNA   | 77FLA 01  |
| <u>Fe (ug/g)</u> |       |     |        |           | <u>Yb (ng/g)</u> |       |     |        |           |
| 300              |       |     | ITNA   | 77FLA 01  | <                | 300   | L   | ITNA   | 77FLA 01  |
| <u>Hf (ng/g)</u> |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| <                | 200   | L   | ITNA   | 77FLA 01  | 6                | 0.71  |     | ITNA   | 77FLA 01  |
| <u>Hg (ng/g)</u> |       |     |        |           | 7.3              |       |     | RTNA   | 65BAL 01  |
| 98               | 5.95  |     | FAA    | 82FLA 01  | 7.5              |       |     | XRF    | 65BAL 01  |
| <u>La (ug/g)</u> |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
| <                | 3     | L   | ITNA   | 77FLA 01  | <                | 75    | L   | ITNA   | 77FLA 01  |
| <u>Lu (ng/g)</u> |       |     |        |           |                  |       |     |        |           |
| <                | 40    | L   | ITNA   | 77FLA 01  |                  |       |     |        |           |
| <u>Nd (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| <                | 3     | L   | ITNA   | 77FLA 01  |                  |       |     |        |           |
| <u>Rb (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 470              | 26    |     | ITNA   | 77FLA 01  |                  |       |     |        |           |

TABLE 70A-1: COMPILED DATA FOR NBS SRM 70A POTASH FELDSPAR (revised 3/1/86)

| ELEMENT  | UNITS | NBS  | CONSENSUS           | MEDIAN | RANGE           | AA       | NAA      | OTHER METHODS  |        |
|----------|-------|------|---------------------|--------|-----------------|----------|----------|----------------|--------|
|          |       | Mean | Mean ± SD (n)       |        |                 | Mean (n) | Mean (n) | Mean ± SD (n)  | Method |
| Al       | %     | 9.47 | ---                 | ---    | ---             | ---      | ---      | ---            |        |
| Ba       | ug/g  | 180  | 121 (2)             | ---    | 120 - 122       | ---      | 120 (1)  | 121.9 (1)      | IDMS   |
| Be       | ng/g  | ---  | 640 (1)             | ---    | ---             | 640 (1)  | ---      | ---            |        |
| Bi       | ng/g  | ---  | 68 (1)              | ---    | ---             | 68 (1)   | ---      | ---            |        |
| C        | ug/g  | ---  | 50 (1)              | ---    | ---             | ---      | ---      | 50 (1)         | CB     |
| Ca       | ug/g  | 790  | 770 (2)             | ---    | 640 - 900       | 770 (2)  | ---      | ---            |        |
| Cd       | ng/g  | ---  | 8.7 (1)             | ---    | ---             | ---      | ---      | 8.7 (1)        | IDMS   |
| Ce       | ug/g  | ---  | < 4                 | ---    | ---             | ---      | < 4      | ---            |        |
| Co       | ng/g  | ---  | 200 (1)             | ---    | ---             | ---      | 200 (1)  | ---            |        |
| Cr       | ug/g  | ---  | < 4                 | ---    | ---             | ---      | < 4      | ---            |        |
| Cs       | ug/g  | ---  | 9.64 (2)            | ---    | 9.28 - 10       | 10 (1)   | 9.28 (1) | ---            |        |
| Eu       | ng/g  | ---  | 570 (1)             | ---    | ---             | ---      | 570 (1)  | ---            |        |
| Fe       | ug/g  | 520  | 600 ± 100 (3)       | 600    | 490 - 700       | 595 (2)  | 600 (1)  | ---            |        |
| Hf       | ng/g  | ---  | < 300               | ---    | ---             | ---      | < 300    | ---            |        |
| Hg       | ng/g  | ---  | 15 (1)              | ---    | ---             | 15 (1)   | ---      | ---            |        |
| K        | %     | 9.79 | 9.76 ± 0.07 (4)     | 9.71   | 9.71 - 9.85     | 9.82 (2) | ---      | 9.71 (1)       | ISE    |
| K        | %     | ---  | ---                 | ---    | ---             | ---      | ---      | 9.71 (1)       | FE     |
| LOI      | %     | 0.4  | ---                 | ---    | ---             | ---      | ---      | ---            |        |
| La       | ug/g  | ---  | < 2                 | ---    | ---             | ---      | < 2      | ---            |        |
| Lu       | ng/g  | ---  | 8.0 (1)             | ---    | ---             | ---      | ---      | 8.0 (1)        | IDMS   |
| Na       | %     | 1.87 | 1.86 ± 0.04 (5)     | 1.87   | 1.8 - 1.9       | 1.87 (2) | ---      | 1.85 (1)       | XRF    |
| Na       | %     | ---  | ---                 | ---    | ---             | ---      | ---      | 1.9 (1)        | FE     |
| Na       | %     | ---  | ---                 | ---    | ---             | ---      | ---      | 1.8 (1)        | ISE    |
| Nd       | ug/g  | ---  | < 3                 | ---    | ---             | ---      | < 3      | ---            |        |
| Rb       | ug/g  | 550  | 525 ± 9 (9)         | 524.2  | 507 - 540       | 540 (1)  | 530 (1)  | 519 (2)        | XRF    |
| Rb       | ug/g  | ---  | ---                 | ---    | ---             | ---      | ---      | 524 ± 4 (4)    | IDMS   |
| Rb       | ug/g  | ---  | ---                 | ---    | ---             | ---      | ---      | 520.4 (1)      | MS     |
| S        | ug/g  | ---  | 3.0 (1)             | ---    | ---             | ---      | ---      | 3.0 (1)        | CB     |
| Sb       | ng/g  | ---  | < 400               | ---    | ---             | ---      | < 400    | ---            |        |
| Sc       | ng/g  | ---  | 110 (1)             | ---    | ---             | ---      | 110 (1)  | ---            |        |
| Se       | ug/g  | ---  | 66.1 (1)            | ---    | ---             | ---      | ---      | 66.1 (1)       | XRF    |
| Si       | %     | 31.3 | ---                 | ---    | ---             | ---      | ---      | ---            |        |
| Sm       | ng/g  | ---  | < 200               | ---    | ---             | ---      | < 200    | ---            |        |
| Sn       | ug/g  | ---  | 0.75 (1)            | ---    | ---             | 0.75 (1) | ---      | ---            |        |
| Sr       | ug/g  | ---  | 64.7 ± 1.4 (6)      | 64.8   | 62.4 - 66.4     | ---      | ---      | 62.43 (1)      | XRF    |
| Sr       | ug/g  | ---  | ---                 | ---    | ---             | ---      | ---      | 64.8 (1)       | MS     |
| Sr       | ug/g  | ---  | ---                 | ---    | ---             | ---      | ---      | 65.2 ± 1.0 (4) | IDMS   |
| Sr-87/86 | ratio | ---  | 1.2002 ± 0.0024 (3) | 1.2002 | 1.1978 - 1.2025 | ---      | ---      | 1.2002 (1)     | MS     |
| Sr-87/86 | ratio | ---  | ---                 | ---    | ---             | ---      | ---      | 1.2002 (2)     | IDMS   |
| Ta       | ng/g  | ---  | 150 (1)             | ---    | ---             | ---      | 150 (1)  | ---            |        |
| Tb       | ng/g  | ---  | < 200               | ---    | ---             | ---      | < 200    | ---            |        |
| Th       | ng/g  | ---  | 300 (1)             | ---    | ---             | ---      | 300 (1)  | ---            |        |
| Ti       | ug/g  | 60   | ---                 | ---    | ---             | ---      | ---      | ---            |        |
| Tl       | ug/g  | ---  | 2.81 (2)            | ---    | 2.72 - 2.91     | ---      | ---      | 2.81 (2)       | ASV    |
| Yb       | ng/g  | ---  | < 500               | ---    | ---             | ---      | < 500    | ---            |        |
| Zn       | ug/g  | ---  | < 5                 | ---    | ---             | ---      | < 5      | ---            |        |
| Zr       | ug/g  | ---  | < 90                | ---    | ---             | ---      | < 90     | ---            |        |

TABLE 70A-2: INDIVIDUAL DATA FOR NBS SRM 70A (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Hf (ng/g)</u> |       |     |        |           |
| 120              | 5     |     | ITNA   | 77FLA 01  | <                | 300   | L   | ITNA   | 77FLA 01  |
| 121.9            |       |     | IDMS   | 69LAE 01  | <u>Hg (ng/g)</u> |       |     |        |           |
| <u>Be (ng/g)</u> |       |     |        |           | 15               | 1.03  |     | FAA    | 82FLA 01  |
| 640              |       |     | AA     | 83TER 01  | <u>K (%)</u>     |       |     |        |           |
| <u>Bi (ng/g)</u> |       |     |        |           | 9.71             |       |     | FE     | 75PUF 01  |
| 68               |       |     | FAA    | 84TER 03  | 9.71             |       |     | ISE    | 75PUF 01  |
| <u>C (ug/g)</u>  |       |     |        |           | 9.79             |       |     | AA     | 73RAM 01  |
| 50               |       |     | CB     | 78TER 01  | 9.85             |       |     | AA     | 84SCH 01  |
| <u>Ca (ug/g)</u> |       |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| 640              |       |     | AA     | 73RAM 01  | <                | 2     | L   | ITNA   | 77FLA 01  |
| 900              |       |     | AA     | 84SCH 01  | <u>Lu (ng/g)</u> |       |     |        |           |
| <u>Cd (ng/g)</u> |       |     |        |           | <                | 100   | L   | ITNA   | 77FLA 01  |
| 8.7              |       |     | IDMS   | 74ROS 02  | 8                |       |     | IDMS   | 76MCC 03  |
| <u>Ce (ug/g)</u> |       |     |        |           | <u>Na (%)</u>    |       |     |        |           |
| <                | 4     | L   | ITNA   | 77FLA 01  | 1.8              |       |     | ISE    | 75PUF 01  |
| <u>Co (ng/g)</u> |       |     |        |           | 1.85             |       |     | WXRF   | 83BAL 01  |
| 200              |       |     | ITNA   | 77FLA 01  | 1.87             |       |     | AA     | 84SCH 01  |
| <u>Cr (ug/g)</u> |       |     |        |           | 1.87             |       |     | AA     | 73RAM 01  |
| <                | 4     | L   | ITNA   | 77FLA 01  | 1.9              |       |     | FE     | 75PUF 01  |
| <u>Cs (ug/g)</u> |       |     |        |           | <u>Nd (ug/g)</u> |       |     |        |           |
| 9.28             | 0.15  |     | ITNA   | 77FLA 01  | <                | 3     | L   | ITNA   | 77FLA 01  |
| 10               |       |     | AA     | 72ALL 01  | <u>Rb (ug/g)</u> |       |     |        |           |
| <u>Eu (ng/g)</u> |       |     |        |           | 507.4            |       |     | WXRF   | 83VAL 01  |
| 570              | 10    |     | ITNA   | 77FLA 01  | 519.1            |       |     | IDMS   | 82KRA 01  |
| <u>Fe (ug/g)</u> |       |     |        |           | 520.4            |       |     | MS     | 84ZIC 01  |
| 490              |       |     | AA     | 73RAM 01  | 523.4            |       |     | IDMS   | 70LAE 01  |
| 600              |       |     | ITNA   | 77FLA 01  | 524.2            | 1.5   |     | IDMS   | 74COR 01  |
| 700              |       |     | AA     | 84SCH 01  | 529.8            | 1.6   |     | IDMS   | 69COM 01  |
|                  |       |     |        |           | 529.9            | 1     |     | XRF    | 69COM 01  |
|                  |       |     |        |           | 530              | 15    |     | ITNA   | 77FLA 01  |
|                  |       |     |        |           | 540              |       |     | AA     | 72ALL 01  |
|                  |       |     |        |           | <u>S (ug/g)</u>  |       |     |        |           |
|                  |       |     |        |           | 3                |       |     | CB     | 78TER 01  |

TABLE 70A-2: INDIVIDUAL DATA FOR NBS SRM 70A (cont.)

| Conc                    | Uncer  | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-------------------------|--------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sb (ng/g)</u>        |        |     |        |           | <u>Yb (ng/g)</u> |       |     |        |           |
| <                       | 400    | L   | ITNA   | 77FLA 01  | <                | 500   | L   | ITNA   | 77FLA 01  |
| <u>Sc (ng/g)</u>        |        |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 110                     | 3      |     | ITNA   | 77FLA 01  | <                | 5     | L   | ITNA   | 77FLA 01  |
| <u>Se (ug/g)</u>        |        |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
| 66.1                    | 0.2    |     | XRF    | 69COM 01  | <                | 90    | L   | ITNA   | 77FLA 01  |
| <u>Sm (ng/g)</u>        |        |     |        |           |                  |       |     |        |           |
| <                       | 200    | L   | ITNA   | 77FLA 01  |                  |       |     |        |           |
| <u>Sn (ug/g)</u>        |        |     |        |           |                  |       |     |        |           |
| 0.75                    |        |     | AA     | 82TER 01  |                  |       |     |        |           |
| <u>Sr (ug/g)</u>        |        |     |        |           |                  |       |     |        |           |
| 62.43                   |        |     | WXRF   | 83VAL 01  |                  |       |     |        |           |
| 64                      | 0.4    |     | IDMS   | 74COR 01  |                  |       |     |        |           |
| 64.8                    |        |     | MS     | 84ZIC 01  |                  |       |     |        |           |
| 65.1                    | 0.1    |     | IDMS   | 69COM 01  |                  |       |     |        |           |
| 65.5                    |        |     | IDMS   | 82KRA 01  |                  |       |     |        |           |
| 66.4                    |        |     | IDMS   | 70LAE 01  |                  |       |     |        |           |
| <u>Sr-87/86 (ratio)</u> |        |     |        |           |                  |       |     |        |           |
| 1.1978                  | 0.0033 |     | IDMS   | 74COR 01  |                  |       |     |        |           |
| 1.2002                  |        |     | MS     | 84ZIC 01  |                  |       |     |        |           |
| 1.2025                  | 0.0012 |     | IDMS   | 69COM 01  |                  |       |     |        |           |
| <u>Ta (ng/g)</u>        |        |     |        |           |                  |       |     |        |           |
| 150                     | 8      |     | ITNA   | 77FLA 01  |                  |       |     |        |           |
| <u>Tb (ng/g)</u>        |        |     |        |           |                  |       |     |        |           |
| <                       | 200    | L   | ITNA   | 77FLA 01  |                  |       |     |        |           |
| <u>Th (ng/g)</u>        |        |     |        |           |                  |       |     |        |           |
| 300                     |        |     | ITNA   | 77FLA 01  |                  |       |     |        |           |
| <u>Tl (ug/g)</u>        |        |     |        |           |                  |       |     |        |           |
| 2.715                   | 0.217  | 7   | ASV    | 82CAL 01  |                  |       |     |        |           |
| 2.906                   | 0.25   | 7   | ASV    | 82CAL 01  |                  |       |     |        |           |

TABLE 76-1: COMPILED DATA FOR NBS SRM 76 BURNT REFRACTORY (revised 3/1/86)

| ELEMENT | UNITS | NBS   | CONSENSUS | RANGE       | XRF   |     | OTHER METHODS   |
|---------|-------|-------|-----------|-------------|-------|-----|-----------------|
|         |       | Mean  | Mean (n)  |             | Mean  | (n) | Mean (n) Method |
| Al      | %     | 19.93 | 20.05 (1) | ---         | 20.05 | (1) | ---             |
| Ca      | ug/g  | 1930  | 1600 (1)  | ---         | 1600  | (1) | ---             |
| Fe      | %     | 1.66  | 1.53 (2)  | 1.47 - 1.59 | 1.59  | (1) | 1.47 (1) COLOR  |
| K       | %     | 1.28  | 1.29 (1)  | ---         | 1.29  | (1) | ---             |
| LOI     | %     | 0.22  | ---       | ---         | ---   | --- | ---             |
| Li      | ug/g  | 510   | ---       | ---         | ---   | --- | ---             |
| Mg      | ug/g  | 3500  | 2800 (1)  | ---         | 2800  | (1) | ---             |
| Mn      | ug/g  | ---   | 230 (1)   | ---         | 230   | (1) | ---             |
| Na      | ug/g  | 1100  | ---       | ---         | ---   | --- | ---             |
| P       | ug/g  | 300   | ---       | ---         | ---   | --- | ---             |
| Si      | %     | 25.53 | 25.76 (1) | ---         | 25.76 | (1) | ---             |
| Sr      | ug/g  | ---   | 85 (1)    | ---         | 85    | (1) | ---             |
| Ti      | %     | 1.32  | 1.34 (1)  | ---         | 1.34  | (1) | ---             |
| V       | ug/g  | 120   | ---       | ---         | ---   | --- | ---             |
| Zr      | ug/g  | 520   | ---       | ---         | ---   | --- | ---             |

TABLE 77-1: COMPILED DATA FOR NBS SRM 77 BURNT REFRACTORY (revised 3/1/86)

| ELEMENT | UNITS | NBS   | CONSENSUS | RANGE        | XRF   |     | OTHER METHODS   |
|---------|-------|-------|-----------|--------------|-------|-----|-----------------|
|         |       | Mean  | Mean (n)  |              | Mean  | (n) | Mean (n) Method |
| Al      | %     | 27.73 | 31.02 (2) | 30.63 - 31.4 | 31.02 | (2) | ---             |
| Ca      | ug/g  | 1860  | 1400 (1)  | ---          | 1400  | (1) | ---             |
| Fe      | ug/g  | 6290  | 5450 (2)  | 5200 - 5700  | 5200  | (1) | 5700 (1) COLOR  |
| K       | %     | 1.75  | 1.79 (1)  | ---          | 1.79  | (1) | ---             |
| LOI     | %     | 0.21  | ---       | ---          | ---   | --- | ---             |
| Li      | ug/g  | 1630  | ---       | ---          | ---   | --- | ---             |
| Mg      | ug/g  | 3000  | 2200 (1)  | ---          | 2200  | (1) | ---             |
| Mn      | ug/g  | ---   | 80 (1)    | ---          | 80    | (1) | ---             |
| Na      | ug/g  | 440   | ---       | ---          | ---   | --- | ---             |
| P       | ug/g  | 1960  | ---       | ---          | ---   | --- | ---             |
| Si      | %     | 15.12 | 15.32 (2) | 15.3 - 15.34 | 15.32 | (2) | ---             |
| Sr      | ug/g  | ---   | 1200 (1)  | ---          | 1200  | (1) | ---             |
| Ti      | %     | 1.76  | 1.82 (1)  | ---          | 1.82  | (1) | ---             |
| V       | ug/g  | 180   | ---       | ---          | ---   | --- | ---             |
| Zr      | ug/g  | 670   | ---       | ---          | ---   | --- | ---             |

TABLE 78-1: COMPILED DATA FOR NBS SRM 78 BURNT REFRACTORY (revised 3/1/86)

| ELEMENT | UNITS | NBS  | CONSENSUS | RANGE | XRF  |     | OTHER METHODS   |
|---------|-------|------|-----------|-------|------|-----|-----------------|
|         |       | Mean | Mean (n)  |       | Mean | (n) | Mean (n) Method |
| Al      | %     | ---  | 36.84 (1) | ---   | ---  | --- | 36.84 (1) TITR  |
| Fe      | ug/g  | ---  | 5000 (1)  | ---   | ---  | --- | 5000 (1) COLOR  |
| Li      | ug/g  | 930  | ---       | ---   | ---  | --- | ---             |
| Na      | ug/g  | 440  | ---       | ---   | ---  | --- | ---             |

TABLE 76-2: INDIVIDUAL DATA FOR NBS SRM 76  
(revised 3/1/86)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|
| <u>Al (%)</u>    |              |            |               |                  |
| 20.05            |              |            | WXRF          | 67KOD 01         |
| <u>Ca (ug/g)</u> |              |            |               |                  |
| 1600             |              |            | WXRF          | 67KOD 01         |
| <u>Fe (%)</u>    |              |            |               |                  |
| 1.47             | 0.01         |            | COLOR         | 59COL 01         |
| 1.59             |              |            | WXRF          | 67KOD 01         |
| <u>K (%)</u>     |              |            |               |                  |
| 1.29             |              |            | WXRF          | 67KOD 01         |
| <u>Mg (ug/g)</u> |              |            |               |                  |
| 2800             |              |            | WXRF          | 67KOD 01         |
| <u>Mn (ug/g)</u> |              |            |               |                  |
| 230              |              |            | WXRF          | 67KOD 01         |
| <u>Si (%)</u>    |              |            |               |                  |
| 25.76            |              |            | WXRF          | 67KOD 01         |
| <u>Sr (ug/g)</u> |              |            |               |                  |
| 85               |              |            | WXRF          | 67KOD 01         |
| <u>Ti (%)</u>    |              |            |               |                  |
| 1.34             |              |            | WXRF          | 67KOD 01         |

TABLE 77-2: INDIVIDUAL DATA FOR NBS SRM 77  
(revised 3/1/86)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|
| <u>Al (%)</u>    |              |            |               |                  |
| 30.63            |              |            | WXRF          | 67KOD 01         |
| 31.4             |              |            | XRF           | 72ASH 01         |
| <u>Ca (ug/g)</u> |              |            |               |                  |
| 1400             |              |            | WXRF          | 67KOD 01         |
| <u>Fe (ug/g)</u> |              |            |               |                  |
| 5200             |              |            | WXRF          | 67KOD 01         |
| 5700             | 100          |            | COLOR         | 59COL 01         |
| <u>K (%)</u>     |              |            |               |                  |
| 1.79             |              |            | WXRF          | 67KOD 01         |
| <u>Mg (ug/g)</u> |              |            |               |                  |
| 2200             |              |            | WXRF          | 67KOD 01         |
| <u>Mn (ug/g)</u> |              |            |               |                  |
| 80               |              |            | WXRF          | 67KOD 01         |
| <u>Si (%)</u>    |              |            |               |                  |
| 15.3             |              |            | XRF           | 72ASH 01         |
| 15.34            |              |            | WXRF          | 67KOD 01         |
| <u>Sr (ug/g)</u> |              |            |               |                  |
| 1200             |              |            | WXRF          | 67KOD 01         |
| <u>Ti (%)</u>    |              |            |               |                  |
| 1.82             |              |            | WXRF          | 67KOD 01         |

TABLE 78-2: INDIVIDUAL DATA FOR NBS SRM 78 (revised 3/1/86)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|
| <u>Al (%)</u>    |              |            |               |                  |
| 36.84            |              |            | TITR          | 58WAT 01         |
| <u>Fe (ug/g)</u> |              |            |               |                  |
| 5000             | 100          |            | COLOR         | 59COL 01         |

TABLE 76A-1: COMPILED DATA FOR NBS SRMs 76A-78A BURNT REFRACTORIES  
(revised 3/1/86)

| ELEMENT | UNITS | 76A   | 77A   | 78A   |
|---------|-------|-------|-------|-------|
| Al      | %     | 20.47 | 31.84 | 37.92 |
| Ca      | ug/g  | 1570  | 360   | 790   |
| Fe      | %     | 1.12  | 0.699 | 0.840 |
| K       | %     | 1.10  | 0.075 | 1.01  |
| LOI     | %     | 0.34  | 0.22  | 0.42  |
| Li      | ug/g  | 200   | 120   | 560   |
| Mg      | ug/g  | 3140  | 2290  | 4220  |
| Na      | ug/g  | 520   | 275   | 580   |
| P       | ug/g  | 520   | 400   | 5700  |
| Si      | %     | 25.63 | 16.34 | 9.06  |
| Sr      | ug/g  | 310   | 75    | 2120  |
| Ti      | %     | 1.22  | 1.59  | 1.93  |

TABLE 79A-1: COMPILED DATA FOR NBS SRM 79A FLUORSPAR  
(revised 3/1/86)

| ELEMENT          | UNITS | NBS              | CONSENSUS | METHOD |
|------------------|-------|------------------|-----------|--------|
|                  |       | Mean $\pm$ SD    | Mean      |        |
| Ca               | %     | 49.99 $\pm$ 0.03 | ---       | ---    |
| CaF <sub>2</sub> | %     | 97.39 $\pm$ 0.06 | ---       | ---    |
| F                | %     | 47.40 $\pm$ 0.03 | ---       | ---    |
| Si               | ug/g  | 3130             | ---       | ---    |
| U                | ng/g  | ---              | 210 (1)   | NAA    |

TABLE 80-1: COMPILED DATA FOR NBS SRM 80 SODA-LIME GLASS  
(revised 3/1/86)

| ELEMENT | UNITS | NBS   | CONSENSUS | METHOD |
|---------|-------|-------|-----------|--------|
|         |       | Mean  | Mean      |        |
| Al      | ug/g  | 1750  | ---       | ---    |
| As      | ug/g  | 690   | ---       | ---    |
| As(III) | ug/g  | 230   | ---       | ---    |
| As(V)   | ug/g  | 460   | ---       | ---    |
| Ca      | %     | 3.32  | 3.2 (1)   | TITR   |
| Cl      | ug/g  | 470   | ---       | ---    |
| Fe      | ug/g  | 450   | ---       | ---    |
| K       | ug/g  | 330   | ---       | ---    |
| LOI     | %     | 0.3   | ---       | ---    |
| Mg      | %     | 1.95  | 1.93 (1)  | TITR   |
| Mn      | ug/g  | 23    | ---       | ---    |
| Na      | %     | 12.35 | ---       | ---    |
| S       | ug/g  | 1640  | ---       | ---    |
| Si      | %     | 34.6  | ---       | ---    |
| Ti      | ug/g  | 120   | ---       | ---    |
| Zr      | ug/g  | 22    | ---       | ---    |

TABLE 79A-2: INDIVIDUAL DATA FOR NBS SRM 79A  
(revised 3/1/86)

| Conc            | Uncer | Com | Method | Reference |
|-----------------|-------|-----|--------|-----------|
| <u>U (ng/g)</u> |       |     |        |           |
| 210             | 30    |     | DNA    | 86GAU 01  |

TABLE 80-2: INDIVIDUAL DATA FOR NBS SRM 80  
(revised 3/1/86)

| Conc          | Uncer | Com | Method | Reference |
|---------------|-------|-----|--------|-----------|
| <u>Ca (%)</u> |       |     |        |           |
| 3.2           |       |     | TITR   | 80HIT 02  |
| <u>Mg (%)</u> |       |     |        |           |
| 1.93          |       |     | TITR   | 80HIT 02  |

TABLE 88-1: COMPILED DATA FOR NBS SRM 88 DOLOMITIC LIMESTONE (revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS        |  | MEDIAN | RANGE         | OTHER METHODS    |        |
|---------|-------|-------------|------------------|--|--------|---------------|------------------|--------|
|         |       |             | Mean ± SD (n)    |  |        |               | Mean ± SD (n)    | method |
| Al      | ug/g  | 350         | ---              |  | ---    | ---           | ---              |        |
| C-Inorg | %     | 12.9        | 12.93 ± 0.06 (3) |  | 12.90  | 12.90 - 13.00 | 12.93 ± 0.06 (3) | COUL   |
| C-Org   | ug/g  | 800         | ---              |  | ---    | ---           | ---              |        |
| Ca      | %     | 21.8        | 21.81 (1)        |  | ---    | ---           | 21.81 (1)        | TITR   |
| Co      | ug/g  | ---         | 0.7 (1)          |  | ---    | ---           | 0.7 (1)          | NAA    |
| Cr      | ug/g  | ---         | 3.9 (1)          |  | ---    | ---           | 3.9 (1)          | NAA    |
| Fe      | ug/g  | 590         | 580 (1)          |  | ---    | ---           | 580 (1)          | COLOR  |
| H       | ug/g  | 80          | ---              |  | ---    | ---           | ---              |        |
| K       | ug/g  | 250         | ---              |  | ---    | ---           | ---              |        |
| LOI     | %     | 47.52       | ---              |  | ---    | ---           | ---              |        |
| Mg      | %     | 12.95       | ---              |  | ---    | ---           | ---              |        |
| Mn      | ug/g  | 50          | ---              |  | ---    | ---           | ---              |        |
| Na      | ug/g  | 590         | ---              |  | ---    | ---           | ---              |        |
| P       | ug/g  | 13          | ---              |  | ---    | ---           | ---              |        |
| S       | ug/g  | 130         | 287 ± 15 (3)     |  | 290    | 270 - 300     | 300 (1)          | TURB   |
| S       | ug/g  | ---         | ---              |  | ---    | ---           | 280 (2)          | CB     |
| Si      | ug/g  | 1450        | ---              |  | ---    | ---           | ---              |        |
| Sr      | ug/g  | < 85        | 57.5 (2)         |  | ---    | 55 - 60       | 60 (1)           | NAA    |
| Sr      | ug/g  | ---         | ---              |  | ---    | ---           | 55 (1)           | OES    |
| Ti      | ug/g  | 30          | 182 (2)          |  | ---    | 24 - 340      | 24 (1)           | NAA    |
| Ti      | ug/g  | ---         | ---              |  | ---    | ---           | 340 (1)          | COLOR  |

TABLE 88B-1: COMPILED DATA FOR NBS SRM 88B DOLOMITIC LIMESTONE (revised 3/1/86)

| ELEMENT | UNITS | NBS          |
|---------|-------|--------------|
|         |       | Mean ± SD    |
| Al      | ug/g  | 1778 ± 69    |
| C-Inorg | %     | 12.66 ± 0.03 |
| Ca      | %     | 21.53 ± 0.36 |
| Fe      | ug/g  | 1937 ± 14    |
| H2O-    | %     | 0.24         |
| K       | ug/g  | 855 ± 20     |
| LOI     | %     | 46.98        |
| Mg      | %     | 12.68 ± 0.04 |
| Mn      | ug/g  | 124 ± 9      |
| Na      | ug/g  | 215 ± 5      |
| P       | ug/g  | 19 ± 1       |
| Si      | ug/g  | 5282 ± 93    |
| Sr      | ug/g  | 64 ± 3       |
| Ti      | ug/g  | 96           |

TABLE 88-2: INDIVIDUAL DATA FOR NBS SRM 88 (revised 3/1/86)

| <u>Conc</u>        | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> | <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|--------------------|--------------|------------|---------------|------------------|------------------|--------------|------------|---------------|------------------|
| <u>C-Inorg (%)</u> |              |            |               |                  | <u>Fe (ug/g)</u> |              |            |               |                  |
| 12.9               | 0.42         | 41         | COUL          | 86CAH 01         | 580              | 10           |            | COLOR         | 59COL 01         |
| 12.9047            | 0.0109       | 41         | COUL          | 85ENG 01         |                  |              |            |               |                  |
| 13.0003            | 0.1556       | 41         | COUL          | 85ENG 01         | <u>S (ug/g)</u>  |              |            |               |                  |
| <u>Ca (%)</u>      |              |            |               |                  | 270              |              |            | CB            | 55COL 01         |
| 21.81              | 0.03         |            | TITR          | 80HIT 02         | 290              |              |            | CB            | 77LAN 01         |
| <u>Co (ug/g)</u>   |              |            |               |                  | 300              |              |            | TURB          | 73SHA 01         |
| 0.7                | 0.6          |            | RTNA          | 61TUR 01         | <u>Sr (ug/g)</u> |              |            |               |                  |
| <u>Cr (ug/g)</u>   |              |            |               |                  | 55               |              |            | OES           | 58GRA 01         |
| 3.9                |              |            | RTNA          | 61TUR 01         | 60               |              |            | RTNA          | 61TUR 01         |
|                    |              |            |               |                  | <u>Ti (ug/g)</u> |              |            |               |                  |
|                    |              |            |               |                  | 24               | 4            |            | RTNA          | 65WAH 01         |
|                    |              |            |               |                  | 340              |              |            | COLOR         | 63KOR 01         |

TABLE 88A-1: COMPILED DATA FOR NBS SRM 88A DOLOMITIC LIMESTONE (revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE         | NAA<br>Mean (n) | ICPES<br>Mean (n) | XRF<br>Mean (n) | OTHER METHODS |              |
|---------|-------|-------------|----------------------------|--------|---------------|-----------------|-------------------|-----------------|---------------|--------------|
|         |       |             |                            |        |               |                 |                   |                 | Mean (n)      | Method       |
| Ag      | ug/g  | ---         | < 3                        | ---    | ---           | ---             | < 3               | ---             | ---           | ---          |
| Al      | ug/g  | 1000        | 600 (2)                    | ---    | 300 - 900     | ---             | 900 (1)           | 300 (1)         | ---           | ---          |
| As      | ug/g  | ---         | < 5                        | ---    | ---           | ---             | < 5               | ---             | ---           | ---          |
| Au      | ug/g  | ---         | < 3                        | ---    | ---           | ---             | < 3               | ---             | ---           | ---          |
| Ba      | ug/g  | ---         | 18 ± 8 (3)                 | 14     | 13 - 28       | 14 (1)          | 13 (1)            | 28 (1)          | ---           | ---          |
| Be      | ng/g  | ---         | 180 (1)                    | ---    | ---           | ---             | 180 (1)           | ---             | ---           | ---          |
| Bi      | ug/g  | ---         | < 25                       | ---    | ---           | ---             | < 25              | ---             | ---           | ---          |
| C-Inorg | %     | 12.72       | 12.79 (2)                  | ---    | 12.75 - 12.83 | ---             | ---               | ---             | ---           | 12.79 (2) CB |
| Ca      | %     | 21.56       | 21.73 (2)                  | ---    | 20.96 - 22.5  | ---             | 20.96 (1)         | 22.5 (1)        | ---           | ---          |
| Cd      | ug/g  | ---         | < 2                        | ---    | ---           | ---             | < 2               | ---             | ---           | ---          |
| Ce      | ug/g  | ---         | 3.3 ± 1.3 (3)              | 2.7    | 2.46 - 4.8    | 2.7 (1)         | 2.46 (1)          | 4.8 (1)         | ---           | ---          |
| Cl      | ug/g  | ---         | 113 (1)                    | ---    | ---           | ---             | ---               | 113 (1)         | ---           | ---          |
| Co      | ug/g  | ---         | 2.3 ± 1.6 (3)              | 3      | 0.5 - 3.4     | 0.5 (1)         | 3 (1)             | 3.4 (1)         | ---           | ---          |
| Cr      | ug/g  | ---         | 6.95 (2)                   | ---    | 2.2 - 11.7    | 2.2 (1)         | 11.7 (1)          | ---             | ---           | ---          |
| Cu      | ug/g  | ---         | 6.95 (2)                   | ---    | 2.5 - 11.4    | ---             | 2.5 (1)           | 11.4 (1)        | ---           | ---          |
| DY      | ng/g  | ---         | 270 (1)                    | ---    | ---           | ---             | 270 (1)           | ---             | ---           | ---          |
| Er      | ng/g  | ---         | 180 (1)                    | ---    | ---           | ---             | 180 (1)           | ---             | ---           | ---          |
| Eu      | ng/g  | ---         | 450 ± 650 (3)              | 620    | 70 - 1200     | 70 (1)          | 635 (2)           | ---             | ---           | ---          |
| F       | ug/g  | ---         | 500 (1)                    | ---    | ---           | ---             | ---               | 500 (1)         | ---           | ---          |
| Fe      | ug/g  | 1960        | 2090 ± 90 (3)              | 2050   | 2030 - 2200   | 2030 (1)        | 2050 (1)          | 2200 (1)        | ---           | ---          |
| Gd      | ug/g  | ---         | 1.86 (2)                   | ---    | 0.32 - 3.4    | ---             | 1.86 (2)          | ---             | ---           | ---          |
| Hf      | ng/g  | ---         | 180 (1)                    | ---    | ---           | 180 (1)         | ---               | ---             | ---           | ---          |
| Hg      | ng/g  | ---         | 28.2 (1)                   | ---    | ---           | ---             | ---               | ---             | ---           | 28.2 (1) AA  |
| Ho      | ng/g  | ---         | 60 (1)                     | ---    | ---           | ---             | 60 (1)            | ---             | ---           | ---          |
| K       | ug/g  | 1000        | 850 (2)                    | ---    | 700 - 1000    | ---             | 1000 (1)          | 700 (1)         | ---           | ---          |
| LOI     | %     | 46.7        | ---                        | ---    | ---           | ---             | ---               | ---             | ---           | ---          |
| La      | ug/g  | ---         | 1.7 ± 0.4 (3)              | 1.6    | 1.44 - 2.2    | 1.6 (1)         | 1.44 (1)          | 2.2 (1)         | ---           | ---          |
| Li      | ug/g  | ---         | < 2                        | ---    | ---           | ---             | < 2               | ---             | ---           | ---          |
| Lu      | ng/g  | ---         | 30 (2)                     | ---    | 30 - 30       | 30 (1)          | 30 (1)            | ---             | ---           | ---          |

TABLE 88A-1: COMPILED DATA FOR NBS SRM 88A: Dolomitic Limestone (cont.)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE      | NAA<br>Mean (n) | ICPES<br>Mean (n) | XRF<br>Mean (n) | OTHER METHODS<br>Mean (n) method |
|---------|-------|-------------|----------------------------|--------|------------|-----------------|-------------------|-----------------|----------------------------------|
|         |       |             |                            |        |            |                 |                   |                 |                                  |
| Mg      | %     | 12.84       | 13.03 (2)                  | ---    | 13 - 13.06 | ---             | 13.06 (1)         | 13 (1)          | ---                              |
| Mn      | ug/g  | 230         | 180 (2)                    | ---    | 150 - 210  | ---             | 210 (1)           | 150 (1)         | ---                              |
| Mo      | ug/g  | ---         | < 3                        | ---    | ---        | ---             | < 3               | ---             | ---                              |
| Na      | ug/g  | 74          | 127 (2)                    | ---    | 104 - 150  | 150 (1)         | 104 (1)           | ---             | ---                              |
| Nd      | ug/g  | ---         | 1.33 (2)                   | ---    | 1.26 - 1.4 | 1.4 (1)         | 1.26 (1)          | ---             | ---                              |
| Ni      | ug/g  | ---         | < 3                        | ---    | ---        | ---             | < 3               | ---             | ---                              |
| P       | ug/g  | 44          | 145 (2)                    | ---    | 70 - 220   | ---             | 70 (1)            | 220 (1)         | ---                              |
| Pb      | ug/g  | ---         | 15 (2)                     | ---    | 3 - 27     | ---             | 27 (1)            | 3 (1)           | ---                              |
| Pr      | ng/g  | ---         | 310 (1)                    | ---    | ---        | ---             | 310 (1)           | ---             | ---                              |
| Rb      | ug/g  | ---         | 2 (1)                      | ---    | ---        | 2 (1)           | ---               | ---             | ---                              |
| S       | ug/g  | ---         | 34 ± 39 (3)                | 71.7   | 4 - 78     | ---             | ---               | 78 (1)          | 12.5 (2) CB                      |
| Sb      | ug/g  | ---         | < 10                       | ---    | ---        | ---             | < 10              | ---             | ---                              |
| Sc      | ng/g  | ---         | 300 (1)                    | ---    | ---        | 300 (1)         | ---               | ---             | ---                              |
| Se      | ug/g  | ---         | < 30                       | ---    | ---        | ---             | < 30              | ---             | ---                              |
| Si      | ug/g  | 5600        | 4100 (1)                   | ---    | ---        | ---             | ---               | 4100 (1)        | ---                              |
| Sm      | ng/g  | ---         | 290 (2)                    | ---    | 280 - 300  | 300 (1)         | 280 (1)           | ---             | ---                              |
| Sn      | ug/g  | ---         | 2.1 (1)                    | ---    | ---        | ---             | ---               | 2.1 (1)         | ---                              |
| Sr      | ug/g  | 85          | 59 ± 32 (3)                | 41     | 41 - 96    | ---             | 41 (1)            | 41 (1)          | 96 (1) OES                       |
| Ta      | ng/g  | ---         | 30 (1)                     | ---    | ---        | 30 (1)          | ---               | ---             | ---                              |
| Tb      | ng/g  | ---         | 50 (1)                     | ---    | ---        | 50 (1)          | ---               | ---             | ---                              |
| Th      | ng/g  | ---         | 190 (1)                    | ---    | ---        | 190 (1)         | ---               | ---             | ---                              |
| Ti      | ug/g  | 120         | 123 (2)                    | ---    | 66 - 180   | ---             | 66 (1)            | 180 (1)         | ---                              |
| U       | ng/g  | ---         | 300 (1)                    | ---    | ---        | 300 (1)         | ---               | ---             | ---                              |
| V       | ug/g  | ---         | 5.6 (2)                    | ---    | 2.2 - 9    | ---             | 9 (1)             | ---             | 2.2 (1) OES                      |
| Y       | ug/g  | ---         | 2.23 (2)                   | ---    | 2.16 - 2.3 | ---             | 2.16 (1)          | 2.3 (1)         | ---                              |
| Yb      | ng/g  | ---         | 510 ± 600 (3)              | 170    | 150 - 1200 | 150 (1)         | 685 (2)           | ---             | ---                              |
| Zn      | ug/g  | ---         | 3.45 (2)                   | ---    | 2.8 - 4.1  | ---             | 4.1 (1)           | 2.8 (1)         | ---                              |
| Zr      | ug/g  | ---         | 6.6 (1)                    | ---    | ---        | ---             | ---               | 6.6 (1)         | ---                              |

TABLE 88A-2: INDIVIDUAL DATA FOR NBS SRM 88A (revised 3/1/86)

| Conc               | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|--------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ug/g)</u>   |       |     |        |           | <u>Cl (ug/g)</u> |       |     |        |           |
| <                  | 3     | L   | ICPES  | 81CHU 01  | 113              |       |     | WXRF   | 82LEO 03  |
| <u>Al (ug/g)</u>   |       |     |        |           | <u>Co (ug/g)</u> |       |     |        |           |
| 300                |       |     | EXRF   | 80DAL 01  | 0.5              |       |     | ITNA   | 85POT 02  |
| 900                | 30    |     | ICPES  | 81CHU 01  | 3                | 1     |     | ICPES  | 81CHU 01  |
|                    |       |     |        |           | 3.4              |       |     | XRF    | 76LEO 02  |
| <u>As (ug/g)</u>   |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| <                  | 5     | L   | ICPES  | 81CHU 01  | 2.2              |       |     | ITNA   | 85POT 02  |
| <u>Au (ug/g)</u>   |       |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| <                  | 3     | L   | ICPES  | 81CHU 01  | 11.7             | 1     |     | ICPES  | 81CHU 01  |
| <u>Ba (ug/g)</u>   |       |     |        |           | <u>Dy (ng/g)</u> |       |     |        |           |
| 13                 | 0.26  |     | ICPES  | 81CHU 01  | 2.5              | 1     |     | ICPES  | 81CHU 01  |
| 14                 |       |     | ITNA   | 85POT 02  | 11.4             |       |     | XRF    | 76LEO 02  |
| 28                 |       |     | XRF    | 76LEO 02  | <u>Er (ng/g)</u> |       |     |        |           |
| <u>Be (ng/g)</u>   |       |     |        |           | <u>Eu (ng/g)</u> |       |     |        |           |
| 180                | 20    |     | ICPES  | 81CHU 01  | 270              | 10    |     | ICPES  | 85JAR 02  |
| <u>Bi (ug/g)</u>   |       |     |        |           | <u>F (ug/g)</u>  |       |     |        |           |
| <                  | 25    | L   | ICPES  | 81CHU 01  | 180              | 10    |     | ICPES  | 85JAR 02  |
| <u>C-Inorg (%)</u> |       |     |        |           | <u>Gd (ug/g)</u> |       |     |        |           |
| 12.75              | 0.02  |     | CB     | 80ANO 01  | 70               |       |     | ITNA   | 85POT 02  |
| 12.83              |       |     | CB     | 78TER 01  | 70               | 10    |     | ICPES  | 85JAR 02  |
| <u>Ca (%)</u>      |       |     |        |           | <u>Hf (ng/g)</u> |       |     |        |           |
| 20.96              | 0.69  |     | ICPES  | 81CHU 01  | 1200             | 600   |     | ICPES  | 81CHU 01  |
| 22.5               |       |     | EXRF   | 80DAL 01  | <u>F (ug/g)</u>  |       |     |        |           |
| <u>Cd (ug/g)</u>   |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| <                  | 2     | L   | ICPES  | 81CHU 01  | 500              |       |     | WXRF   | 82LEO 03  |
| <u>Ce (ug/g)</u>   |       |     |        |           | <u>Gd (ug/g)</u> |       |     |        |           |
| <                  | 15    | L   | ICPES  | 81CHU 01  | 2030             |       |     | ITNA   | 85POT 02  |
| 2.46               | 0.27  |     | ICPES  | 85JAR 02  | 2050             | 40    |     | ICPES  | 81CHU 01  |
| 2.7                |       |     | ITNA   | 85POT 02  | 2200             |       |     | EXRF   | 80DAL 01  |
| 4.8                |       |     | XRF    | 76LEO 02  | <u>Hf (ng/g)</u> |       |     |        |           |
|                    |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
|                    |       |     |        |           | 2030             |       |     |        |           |
|                    |       |     |        |           | 2050             |       |     |        |           |
|                    |       |     |        |           | 2200             |       |     |        |           |
|                    |       |     |        |           | 0.32             |       |     |        |           |
|                    |       |     |        |           | 3.4              |       |     |        |           |
|                    |       |     |        |           | 0.02             |       |     |        |           |
|                    |       |     |        |           | 0.35             |       |     |        |           |
|                    |       |     |        |           | 180              |       |     |        |           |
|                    |       |     |        |           | ITNA             |       |     |        |           |
|                    |       |     |        |           | 85POT 02         |       |     |        |           |

TABLE 88A-2: INDIVIDUAL DATA FOR NBS SRM 88A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Hg (ng/g)</u> |       |     |        |           | <u>Ni (ug/g)</u> |       |     |        |           |
| 28.2             | 0.68  |     | FAA    | 82FLA 01  | <                | 3     | L   | ICPES  | 81CHU 01  |
| <u>Ho (ng/g)</u> |       |     |        |           | <u>P (ug/g)</u>  |       |     |        |           |
| 60               | 10    |     | ICPES  | 85JAR 02  | 70               | 4     |     | ICPES  | 81CHU 01  |
|                  |       |     |        |           | 220              |       |     | EXRF   | 80DAL 01  |
| <u>K (ug/g)</u>  |       |     |        |           | <u>Pb (ug/g)</u> |       |     |        |           |
| 700              |       |     | EXRF   | 80DAL 01  | 3                |       |     | XRF    | 76LEO 02  |
| 1000             | 25    |     | ICPES  | 81CHU 01  | 27               | 3     |     | ICPES  | 81CHU 01  |
| <u>La (ug/g)</u> |       |     |        |           | <u>Pr (ng/g)</u> |       |     |        |           |
| <                | 5     | L   | ICPES  | 81CHU 01  |                  |       |     |        |           |
| 1.44             | 0.16  |     | ICPES  | 85JAR 02  | 310              | 20    |     | ICPES  | 85JAR 02  |
| 1.6              |       |     | ITNA   | 85POT 02  |                  |       |     |        |           |
| 2.2              |       |     | XRF    | 76LEO 02  | <u>Rb (ug/g)</u> |       |     |        |           |
| <u>Li (ug/g)</u> |       |     |        |           | 2                |       |     | ITNA   | 85POT 02  |
| <                | 2     | L   | ICPES  | 81CHU 01  | <u>S (ug/g)</u>  |       |     |        |           |
| <u>Lu (ng/g)</u> |       |     |        |           | 4                |       |     | CB     | 78TER 01  |
| 30               |       |     | ITNA   | 85POT 02  | 21               |       |     | CB     | 77LAN 01  |
| 30               | 10    |     | ICPES  | 85JAR 02  | 78               |       |     | WXRF   | 82LEO 03  |
| <u>Mg (%)</u>    |       |     |        |           | <u>Sb (ug/g)</u> |       |     |        |           |
| 13               |       |     | EXRF   | 80DAL 01  | <                | 10    | L   | ICPES  | 81CHU 01  |
| 13.06            | 0.4   |     | ICPES  | 81CHU 01  | <u>Sc (ng/g)</u> |       |     |        |           |
| <u>Mn (ug/g)</u> |       |     |        |           | 300              |       |     | ITNA   | 85POT 02  |
| 150              |       |     | EXRF   | 80DAL 01  | <u>Se (ug/g)</u> |       |     |        |           |
| 210              | 6.3   |     | ICPES  | 81CHU 01  | <                | 30    | L   | ICPES  | 81CHU 01  |
| <u>Mo (ug/g)</u> |       |     |        |           | <u>Si (ug/g)</u> |       |     |        |           |
| <                | 3     | L   | ICPES  | 81CHU 01  | 4100             |       |     | EXRF   | 80DAL 01  |
| <u>Na (ug/g)</u> |       |     |        |           | <u>Sm (ng/g)</u> |       |     |        |           |
| 104              | 7     |     | ICPES  | 81CHU 01  | 280              | 10    |     | ICPES  | 85JAR 02  |
| 150              |       |     | ITNA   | 85POT 02  | 300              |       |     | ITNA   | 85POT 02  |
| <u>Nd (ug/g)</u> |       |     |        |           | <u>Sn (ug/g)</u> |       |     |        |           |
| <                | 20    | L   | ICPES  | 81CHU 01  | <                | 3     | L   | ICPES  | 81CHU 01  |
| 1.26             | 0.11  |     | ICPES  | 85JAR 02  | 2.1              |       |     | XRF    | 76LEO 02  |
| 1.4              |       |     | ITNA   | 85POT 02  |                  |       |     |        |           |

TABLE 88A-2: INDIVIDUAL DATA FOR NBS SRM 88A (cont.)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> | <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|------------------|--------------|------------|---------------|------------------|
| <u>Sr (ug/g)</u> |              |            |               |                  | <u>U (ng/g)</u>  |              |            |               |                  |
| 41               |              |            | XRF           | 76LEO 02         | < 25000          |              | L          | ICPES         | 81CHU 01         |
| 41               | 0.8          |            | ICPES         | 81CHU 01         | 300              |              |            | ITNA          | 85POT 02         |
| 96               |              |            | OES           | 75THO 01         |                  |              |            |               |                  |
| <u>Ta (ng/g)</u> |              |            |               |                  | <u>V (ug/g)</u>  |              |            |               |                  |
| 30               |              |            | ITNA          | 85POT 02         | 2.2              |              |            | OES           | 84PLS 01         |
|                  |              |            |               |                  | 9                | 1            |            | ICPES         | 81CHU 01         |
| <u>Tb (ng/g)</u> |              |            |               |                  | <u>Y (ug/g)</u>  |              |            |               |                  |
| 50               |              |            | ITNA          | 85POT 02         | 2.16             | 0.06         |            | ICPES         | 85JAR 02         |
|                  |              |            |               |                  | 2.3              |              |            | XRF           | 76LEO 02         |
| <u>Th (ng/g)</u> |              |            |               |                  | <u>Yb (ng/g)</u> |              |            |               |                  |
| < 25000          |              | L          | ICPES         | 81CHU 01         | 150              |              |            | ITNA          | 85POT 02         |
| 190              |              |            | ITNA          | 85POT 02         | 170              | 10           |            | ICPES         | 85JAR 02         |
| <u>Ti (ug/g)</u> |              |            |               |                  | <u>Zn (ug/g)</u> |              |            |               |                  |
| 66               | 2            |            | ICPES         | 81CHU 01         | 1200             | 40           |            | ICPES         | 81CHU 01         |
| 180              |              |            | EXRF          | 80DAL 01         |                  |              |            |               |                  |
|                  |              |            |               |                  | <u>Zr (ug/g)</u> |              |            |               |                  |
|                  |              |            |               |                  | < 1              |              | L          | ICPES         | 81CHU 01         |
|                  |              |            |               |                  | 6.6              |              |            | XRF           | 76LEO 02         |

TABLE 91-1: COMPILED DATA FOR NBS SRM 91 OPAL GLASS (revised 3/1/86)

| ELEMENT          | UNITS | NBS Mean | CONSENSUS Mean $\pm$ SD (n) | MEDIAN | RANGE       | AA       |          | NAA      |          | OES               |                     | OTHER METHODS |  |
|------------------|-------|----------|-----------------------------|--------|-------------|----------|----------|----------|----------|-------------------|---------------------|---------------|--|
|                  |       |          |                             |        |             | Mean (n) | Mean (n) | Mean (n) | Mean (n) | Mean $\pm$ SD (n) | Method              |               |  |
| Al               | %     | 2.81     | 3.21 (1)                    | ---    | ---         | ---      | ---      | ---      | ---      | ---               | 3.21 (1)            | TCGS          |  |
| As <sub>23</sub> | ug/g  | 910      | ---                         | ---    | ---         | ---      | ---      | ---      | ---      | ---               | ---                 | ---           |  |
| As <sub>25</sub> | ug/g  | 1020     | ---                         | ---    | ---         | ---      | ---      | ---      | ---      | ---               | ---                 | ---           |  |
| B                | ug/g  | ---      | 302 (1)                     | ---    | ---         | ---      | ---      | ---      | ---      | 302 (1)           | ---                 | ---           |  |
| Ba               | ug/g  | ---      | 79 (1)                      | ---    | ---         | ---      | ---      | ---      | ---      | 79 (1)            | ---                 | ---           |  |
| Ca               | %     | 7.49     | 7.56 (2)                    | ---    | 7.54 - 7.58 | 7.58 (1) | ---      | ---      | ---      | ---               | 7.54 (1)            | TCGS          |  |
| Cl               | ug/g  | 140      | 167 (1)                     | ---    | ---         | ---      | ---      | ---      | ---      | ---               | 167 (1)             | COLOR         |  |
| Co               | ug/g  | ---      | 4.5 (1)                     | ---    | ---         | ---      | ---      | ---      | ---      | 4.5 (1)           | ---                 | ---           |  |
| Cr               | ug/g  | ---      | 26 (2)                      | ---    | 26 - 26     | ---      | ---      | ---      | ---      | 26 (2)            | ---                 | ---           |  |
| Cu               | ug/g  | ---      | 16 (1)                      | ---    | ---         | ---      | ---      | ---      | ---      | 16 (1)            | ---                 | ---           |  |
| F                | %     | 5.73     | 5.58 $\pm$ 0.23 (11)        | 5.62   | 5.1 - 5.81  | ---      | ---      | 5.39 (2) | ---      | ---               | 5.67 $\pm$ 0.08 (6) | ISE           |  |
| F                | %     | ---      | ---                         | ---    | ---         | ---      | ---      | ---      | ---      | ---               | 5.0 (2)             | IC            |  |
| F                | %     | ---      | ---                         | ---    | ---         | ---      | ---      | ---      | ---      | ---               | 5.7 (1)             | CPAA          |  |
| F                | %     | ---      | ---                         | ---    | ---         | ---      | ---      | ---      | ---      | ---               | 5.81 (1)            | COLOR         |  |
| Fe               | ug/g  | 570      | 2200 $\pm$ 2200 (5)         | 700    | 430 - 5200  | 700 (1)  | ---      | 600 (1)  | ---      | 430 (1)           | 4000 (1)            | TCGS          |  |
| Fe               | ug/g  | ---      | ---                         | ---    | ---         | ---      | ---      | ---      | ---      | ---               | 5200 (1)            | COLOR         |  |
| Ga               | ug/g  | ---      | 12 (1)                      | ---    | ---         | ---      | ---      | ---      | ---      | 12 (1)            | ---                 | ---           |  |
| K                | %     | 2.7      | 2.7 (2)                     | ---    | 2.68 - 2.72 | 2.72 (1) | ---      | ---      | ---      | ---               | 2.68 (1)            | TCGS          |  |
| Mg               | ug/g  | ---      | 60 (1)                      | ---    | ---         | ---      | ---      | ---      | ---      | ---               | 60 (1)              | TCGS          |  |
| Mn               | ug/g  | ---      | 51 (2)                      | ---    | 39 - 63     | ---      | ---      | ---      | ---      | 51 (2)            | ---                 | ---           |  |
| Na               | %     | 6.29     | 6.26 $\pm$ 0.06 (3)         | 6.23   | 6.22 - 6.32 | 6.22 (1) | ---      | 6.23 (1) | ---      | ---               | 6.32 (1)            | TCGS          |  |
| Ni               | ug/g  | ---      | 3.4 ? (2)                   | ---    | 0.79 - 6    | ---      | ---      | 0.79 (1) | ---      | 6 (1)             | ---                 | ---           |  |
| O                | %     | ---      | 49.0 (1)                    | ---    | ---         | ---      | ---      | ---      | ---      | ---               | 49.0 (1)            | 14NAA         |  |
| P                | ug/g  | 96       | ---                         | ---    | ---         | ---      | ---      | ---      | ---      | ---               | ---                 | ---           |  |
| Pb               | ug/g  | 900      | 580 ? (2)                   | ---    | 17 - 1150   | ---      | ---      | ---      | ---      | 580 (2)           | ---                 | ---           |  |
| Si               | %     | 31.54    | 31.9 $\pm$ 0.4 (3)          | 32.1   | 31.5 - 32.2 | 31.5 (1) | ---      | 32.2 (1) | ---      | ---               | 32.1 (1)            | TCGS          |  |
| Sr               | ug/g  | ---      | 39 (1)                      | ---    | ---         | ---      | ---      | ---      | ---      | 39 (1)            | ---                 | ---           |  |
| Ti               | ug/g  | 110      | 135 $\pm$ 23 (3)            | 140    | 110 - 156   | ---      | ---      | ---      | ---      | 148 (2)           | ---                 | ---           |  |
| U                | ng/g  | ---      | 625 (2)                     | ---    | 540 - 710   | ---      | ---      | 625 (2)  | ---      | ---               | ---                 | ---           |  |
| V                | ug/g  | ---      | 43 (1)                      | ---    | ---         | ---      | ---      | ---      | ---      | 43 (1)            | ---                 | ---           |  |
| Zn               | ug/g  | 640      | 700 (1)                     | ---    | ---         | 700 (1)  | ---      | ---      | ---      | ---               | ---                 | ---           |  |
| Zr               | ug/g  | 70       | 47 (1)                      | ---    | ---         | ---      | ---      | ---      | ---      | 47 (1)            | ---                 | ---           |  |

TABLE 91-2: INDIVIDUAL DATA FOR NBS SRM 91 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>    |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| 3.21             |       | 35  | TCGS   | 78GLA 04  | 430              |       |     | OES    | 64FIL 01  |
|                  |       |     |        |           | 600              |       | 35  | IENA   | 79GLA 03  |
| <u>B (ug/g)</u>  |       |     |        |           | 700              |       |     | AA     | 84SCH 01  |
| 302              |       |     | OES    | 64FIL 01  | 4000             |       | 35  | TCGS   | 78GLA 04  |
|                  |       |     |        |           | 5200             | 100   |     | COLOR  | 59COL 01  |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Ga (ug/g)</u> |       |     |        |           |
| 79               |       |     | OES    | 72AVN 01  | 12               |       |     | OES    | 72AVN 01  |
| <u>Ca (%)</u>    |       |     |        |           | <u>K (%)</u>     |       |     |        |           |
| 7.54             |       | 35  | TCGS   | 78GLA 04  | 2.68             |       | 35  | TCGS   | 78GLA 04  |
| 7.58             |       |     | AA     | 84SCH 01  | 2.72             |       |     | AA     | 84SCH 01  |
| <u>Cl (ug/g)</u> |       |     |        |           | <u>Mg (ug/g)</u> |       |     |        |           |
| 167              | 25    |     | COLOR  | 85WHI 01  | 60               |       | 35  | TCGS   | 78GLA 04  |
| <u>Co (ug/g)</u> |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 4.5              |       |     | OES    | 72AVN 01  | 39               |       |     | OES    | 64FIL 01  |
|                  |       |     |        |           | 63               |       |     | OES    | 72AVN 01  |
| <u>Cr (ug/g)</u> |       |     |        |           | <u>Na (%)</u>    |       |     |        |           |
| 26               |       |     | OES    | 64FIL 01  | 6.22             |       |     | AA     | 84SCH 01  |
| 26               |       |     | OES    | 72AVN 01  | 6.23             |       | 35  | IENA   | 79GLA 03  |
| <u>Cu (ug/g)</u> |       |     |        |           | 6.32             |       | 35  | TCGS   | 78GLA 04  |
| 16               |       |     | OES    | 72AVN 01  | <u>Ni (ug/g)</u> |       |     |        |           |
| <u>F (%)</u>     |       |     |        |           | 0.79             |       | 35  | IENA   | 79GLA 03  |
| 4.9              | 0.1   |     | IC     | 83KEN 04  | 6                |       |     | OES    | 72AVN 01  |
| 5.1              |       |     | IC     | 82WIL 02  | <u>O (%)</u>     |       |     |        |           |
| 5.16             |       | 35  | IENA   | 79GLA 03  | 49               | 0.6   |     | 14NAA  | 80NOR 01  |
| 5.55             | 0.09  |     | ISE    | 85WHI 01  | <u>Pb (ug/g)</u> |       |     |        |           |
| 5.6              | 0.16  | 11  | ISE    | 77HOP 01  | 17               |       |     | OES    | 64FIL 01  |
| 5.62             | 0.08  |     | NAA    | 80NOR 01  | 1150             |       |     | OES    | 72AVN 01  |
| 5.68             | 0.15  |     | ISE    | 77TRO 01  | <u>Si (%)</u>    |       |     |        |           |
| 5.7              |       | 11  | ISE    | 77HOP 01  | 31.5             | 1.21  |     | AA     | 82KIS 01  |
| 5.7              | 0.07  |     | CPAA   | 84HAN 01  | 32.1             |       | 35  | TCGS   | 78GLA 04  |
| 5.72             |       |     | ISE    | 70ING 01  | 32.2             |       | 35  | IENA   | 79GLA 03  |
| 5.75             | 0.003 |     | ISE    | 71PET 01  |                  |       |     |        |           |
| 5.81             | 0.21  |     | COLOR  | 83CHA 02  |                  |       |     |        |           |

TABLE 91-2: INDIVIDUAL DATA FOR NBS SRM 91 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sr (ug/g)</u> |       |     |        |           | <u>U (ng/g)</u>  |       |     |        |           |
| 39               |       |     | OES    | 72AVN 01  | 540              |       |     | DNA    | 66HAM 01  |
| <u>Ti (ug/g)</u> |       |     |        |           | 710              | 60    |     | DNA    | 86GAU 01  |
| <                | 350   | L   | IENA   | 79GLA 03  | <u>V (ug/g)</u>  |       |     |        |           |
| 110              |       | 35  | TCGS   | 78GLA 04  | 43               |       |     | OES    | 72AVN 01  |
| 140              |       |     | OES    | 72AVN 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| 156              |       |     | OES    | 64FIL 01  | 700              |       |     | AA     | 84SCH 01  |
|                  |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 47               |       |     | OES    | 64FIL 01  |

TABLE 92-1: COMPILED DATA FOR NBS SRM 92 SODA-LIME GLASS  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean (n) | METHOD |
|---------|-------|----------------------|-----------------------|--------|
| B       | ug/g  | 2180 $\pm$ 90        | ---                   | ---    |
| Ca      | %     | 5.9                  | 5.88 (1)              | MPOES  |
| K       | ug/g  | 5000                 | 4810 (1)              | MPOES  |
| LOI     | %     | 0.42                 | ---                   | ---    |
| Mg      | ug/g  | 600                  | ---                   | ---    |
| Na      | %     | 9.72                 | 9.65 (1)              | MPOES  |
| Si      | %     | 35                   | ---                   | ---    |
| Zn      | ug/g  | 1600                 | ---                   | ---    |

TABLE 93-1: COMPILED DATA FOR NBS SRM 93 BOROSILICATE GLASS  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean (n) | METHOD |
|---------|-------|-------------|-----------------------|--------|
| Fe      | ug/g  | ---         | 550 (1)               | COLOR  |
| Si      | %     | ---         | 37.86 (1)             | AA     |

TABLE 93A-1: COMPILED DATA FOR NBS SRM 93A: Borosilicate Glass  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean |
|---------|-------|-------------|
| Al      | %     | 1.21        |
| B       | %     | 3.9         |
| Ca      | ug/g  | 70          |
| Cl      | ug/g  | 600         |
| Fe      | ug/g  | 200         |
| K       | ug/g  | 120         |
| Mg      | ug/g  | 30          |
| Na      | %     | 2.95        |
| Si      | %     | 37.7        |
| Ti      | ug/g  | 84          |
| Zr      | ug/g  | 310         |

TABLE 92-2: INDIVIDUAL DATA FOR NBS SRM 92  
(revised 3/1/86)

| <u>Conc</u>     | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|-----------------|--------------|------------|---------------|------------------|
| <u>Ca (%)</u>   |              |            |               |                  |
| 5.88            |              |            | MPOES         | 85ZHA 01         |
| <u>K (ug/g)</u> |              |            |               |                  |
| 4810            |              |            | MPOES         | 85ZHA 01         |
| <u>Na (%)</u>   |              |            |               |                  |
| 9.65            |              |            | MPOES         | 85ZHA 01         |

TABLE 93-2: INDIVIDUAL DATA FOR NBS SRM 93  
(revised 3/1/86)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|
| <u>Fe (ug/g)</u> |              |            |               |                  |
| 550              | 10           |            | COLOR         | 59COL 01         |
| <u>Si (%)</u>    |              |            |               |                  |
| 37.86            | 0.84         |            | AA            | 82KIS 01         |

TABLE 97-1: COMPILED DATA FOR NBS SRM 97 FLINT CLAY (revised 3/1/86)

| ELE | UNITS | NBS<br>Mean | CONSENSUS    |     | MEDIAN | RANGE         | NAA<br>Mean (n) | OTHER METHODS |        |           |        |
|-----|-------|-------------|--------------|-----|--------|---------------|-----------------|---------------|--------|-----------|--------|
|     |       |             | Mean ± SD    | (n) |        |               |                 | Mean (n)      | Method | Mean (n)  | Method |
| Al  | %     | 18.1        | 20.49 ± 0.02 | (3) | 20.5   | 20.47 - 20.51 | ---             | 20.47 (1)     | COLOR  | 20.5 (1)  | TITR   |
| Al  | %     | ---         | ---          | --- | ---    | ---           | ---             | ---           | ---    | 20.51 (1) | CHEM   |
| B   | ug/g  | ---         | 64           | (2) | ---    | 57 - 71.3     | ---             | ---           | ---    | 64.2 (2)  | OES    |
| Ba  | ug/g  | 130         | 170 ± 80     | (3) | 141    | 110 - 270     | 270 (1)         | 126 (2)       | OES    | ---       | ---    |
| Be  | ug/g  | ---         | 1.3          | (1) | ---    | ---           | ---             | ---           | ---    | 1.3 (1)   | OES    |
| C   | ug/g  | ---         | 3200         | (1) | ---    | ---           | ---             | ---           | ---    | 3200 (1)  | CB     |
| Ca  | ug/g  | 720         | ---          | --- | ---    | ---           | ---             | ---           | ---    | ---       | ---    |
| Ce  | ug/g  | ---         | 58.8         | (2) | ---    | 57 - 60.7     | 57 (1)          | 60.7 (1)      | OES    | ---       | ---    |
| Co  | ug/g  | ---         | 3.7 ± 0.6    | (3) | 3.46   | 3.3 - 4.4     | 3.85 (2)        | 3.46 (1)      | OES    | ---       | ---    |
| Cr  | ug/g  | 540         | 550 ± 60     | (6) | 540    | 486 - 639     | 578 (2)         | 486 (1)       | OES    | 639 (1)   | AA     |
| Cr  | ug/g  | ---         | ---          | --- | ---    | ---           | ---             | 500 (1)       | COLOR  | 540 (1)   | CHEM   |
| Cs  | ug/g  | ---         | 2.4          | (1) | ---    | ---           | 2.4 (1)         | ---           | ---    | ---       | ---    |
| Cu  | ug/g  | 24          | 18 ± 5       | (4) | 18.5   | 11 - 22       | ---             | 14.8 (2)      | OES    | 20 (1)    | CHEM   |
| Cu  | ug/g  | ---         | ---          | --- | ---    | ---           | ---             | ---           | ---    | 22 (1)    | COLOR  |
| Dy  | ug/g  | ---         | 4.28         | (1) | ---    | ---           | ---             | ---           | ---    | 4.28 (1)  | OES    |
| Eu  | ug/g  | ---         | 1.4          | (2) | ---    | 1.24 - 1.56   | 1.24 (1)        | 1.56 (1)      | OES    | ---       | ---    |
| Fe  | ug/g  | 6850        | 6660 ± 130   | (5) | 6600   | 6500 - 6800   | 6600 (1)        | 6800 (1)      | TITR   | 6550 (2)  | COLOR  |
| Fe  | ug/g  | ---         | ---          | --- | ---    | ---           | ---             | 6800 (1)      | CHEM   | ---       | ---    |
| Ga  | ug/g  | ---         | 45.1         | (1) | ---    | ---           | ---             | ---           | ---    | 45.1 (1)  | OES    |
| Hf  | ug/g  | ---         | 39.5         | (1) | ---    | ---           | 39.5 (1)        | ---           | ---    | ---       | ---    |
| Hg  | ng/g  | ---         | 110          | (2) | ---    | 68 - 159.2    | ---             | 110 (2)       | AA     | ---       | ---    |
| K   | ug/g  | 4500        | ---          | --- | ---    | ---           | ---             | ---           | ---    | ---       | ---    |
| LOI | %     | 13.35       | ---          | --- | ---    | ---           | ---             | ---           | ---    | ---       | ---    |
| La  | ug/g  | ---         | 34           | (1) | ---    | ---           | 34 (1)          | ---           | ---    | ---       | ---    |
| Li  | ug/g  | 1070        | 1074         | (1) | ---    | ---           | ---             | ---           | ---    | 1074 (1)  | OES    |
| Lu  | ug/g  | ---         | 0.96         | (1) | ---    | ---           | 0.96 (1)        | ---           | ---    | ---       | ---    |
| Mg  | %     | 0.157       | 0.145        | (2) | ---    | 0.13 - 0.16   | ---             | 0.16 (1)      | CHEM   | 0.13 (1)  | COLOR  |
| Mn  | ug/g  | 15          | 50 ± 44      | (3) | 35     | 16 - 99.7     | ---             | 67 (2)        | OES    | 16 (1)    | CHEM   |
| Mo  | ug/g  | 1.3         | 2.0          | (1) | ---    | ---           | ---             | ---           | ---    | 2.0 (1)   | CHEM   |
| Na  | ug/g  | 520         | ---          | --- | ---    | ---           | ---             | ---           | ---    | ---       | ---    |
| Nb  | ug/g  | ---         | 35.6         | (1) | ---    | ---           | ---             | ---           | ---    | 35.6 (1)  | OES    |
| Nd  | ug/g  | ---         | 19           | (1) | ---    | ---           | ---             | 19 (1)        | OES    | ---       | ---    |
| Ni  | ug/g  | ---         | 34.4         | (2) | ---    | 32 - 36.8     | ---             | 34.4 (2)      | OES    | ---       | ---    |
| P   | ug/g  | 350         | ---          | --- | ---    | ---           | ---             | ---           | ---    | ---       | ---    |
| Pb  | ug/g  | ---         | 34.6         | (2) | ---    | 34.3 - 35     | ---             | 34.3 (1)      | OES    | 35 (1)    | AA     |
| Rb  | ug/g  | ---         | 24           | (1) | ---    | ---           | 24 (1)          | ---           | ---    | ---       | ---    |
| S   | ug/g  | 170         | 176 ± 22     | (3) | 170    | 158 - 200     | ---             | 200 (1)       | TURB   | 164 (2)   | CB     |
| Sb  | ug/g  | ---         | 1.4          | (1) | ---    | ---           | 1.4 (1)         | ---           | ---    | ---       | ---    |
| Sc  | ug/g  | ---         | 16.4         | (2) | ---    | 12.1 - 20.7   | 20.7 (1)        | 12.1 (1)      | OES    | ---       | ---    |
| Si  | %     | 20.02       | 20.0         | (1) | ---    | ---           | ---             | 20 (1)        | TITR   | ---       | ---    |
| Sm  | ug/g  | ---         | 5.8          | (1) | ---    | ---           | 5.8 (1)         | ---           | ---    | ---       | ---    |
| Sn  | ug/g  | ---         | 8.6          | (2) | ---    | 7 - 10.1      | ---             | 8.55 (2)      | OES    | ---       | ---    |
| Sr  | ug/g  | ---         | 73 ± 38      | (3) | 88     | 30 - 101      | 30 (1)          | 94.5 (2)      | OES    | ---       | ---    |
| Ta  | ug/g  | ---         | 4.2          | (1) | ---    | ---           | 4.2 (1)         | ---           | ---    | ---       | ---    |
| Tb  | ug/g  | ---         | 1.27         | (1) | ---    | ---           | 1.27 (1)        | ---           | ---    | ---       | ---    |
| Th  | ug/g  | ---         | 37           | (1) | ---    | ---           | 37 (1)          | ---           | ---    | ---       | ---    |
| Ti  | %     | 1.42        | 1.39 ± 0.08  | (3) | 1.43   | 1.3 - 1.43    | ---             | 1.3 (1)       | COLOR  | 1.43 (1)  | CHEM   |
| Ti  | %     | ---         | ---          | --- | ---    | ---           | ---             | 1.43 (1)      | TITR   | ---       | ---    |
| V   | ug/g  | 225         | 240 ± 90     | (4) | 205    | 148 - 362     | ---             | 255 (2)       | OES    | 205 (1)   | COLOR  |
| V   | ug/g  | ---         | ---          | --- | ---    | ---           | ---             | 234 (1)       | CHEM   | ---       | ---    |
| Y   | ug/g  | ---         | 35.3         | (2) | ---    | 33 - 37.6     | ---             | 35.3 (2)      | OES    | ---       | ---    |
| Yb  | ug/g  | ---         | 7.1          | (2) | ---    | 6.8 - 7.47    | 6.8 (1)         | 7.47 (1)      | OES    | ---       | ---    |
| Zn  | ug/g  | ---         | 92           | (2) | ---    | 81 - 103      | 103 (1)         | 81 (1)        | XRF    | ---       | ---    |
| Zr  | ug/g  | 1850        | 1390         | (1) | ---    | ---           | 1390 (1)        | ---           | ---    | ---       | ---    |

TABLE 97-2: INDIVIDUAL DATA FOR NBS SRM 97 (revised 3/1/86)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> | <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|------------------|--------------|------------|---------------|------------------|
| <u>Al (%)</u>    |              |            |               |                  | <u>Cu (ug/g)</u> |              |            |               |                  |
| 20.47            |              |            | COLOR         | 57SHI 01         | 11               |              |            | OES           | 64FIL 01         |
| 20.5             | 0.03         |            | TITR          | 84DAS 01         | 18.5             |              |            | OES           | 77FLA 01         |
| 20.51            |              |            | CHEM          | 57SHI 01         | 20               |              |            | CHEM          | 57SHI 01         |
|                  |              |            |               |                  | 22               |              |            | COLOR         | 57SHI 01         |
| <u>B (ug/g)</u>  |              |            |               |                  | <u>Dy (ug/g)</u> |              |            |               |                  |
| 57               |              |            | OES           | 64FIL 01         |                  |              |            |               |                  |
| 71.3             |              |            | OES           | 77FLA 01         | 4.28             |              |            | OES           | 77FLA 01         |
| <u>Ba (ug/g)</u> |              |            |               |                  | <u>Eu (ug/g)</u> |              |            |               |                  |
| 110              |              |            | OES           | 77FLA 01         | 1.24             | 0.03         |            | ITNA          | 77FLA 01         |
| 141              |              |            | OES           | 58GRA 01         | 1.56             |              |            | OES           | 77FLA 01         |
| 270              | 21           |            | ITNA          | 77FLA 01         |                  |              |            |               |                  |
| <u>Be (ug/g)</u> |              |            |               |                  | <u>Fe (ug/g)</u> |              |            |               |                  |
| 1.3              |              |            | OES           | 77FLA 01         | 6500             | 100          |            | COLOR         | 59COL 01         |
|                  |              |            |               |                  | 6600             |              |            | COLOR         | 57SHI 01         |
|                  |              |            |               |                  | 6600             | 100          |            | ITNA          | 77FLA 01         |
|                  |              |            |               |                  | 6800             |              |            | CHEM          | 57SHI 01         |
|                  |              |            |               |                  | 6800             | 600          |            | TITR          | 84DAS 01         |
| <u>C (ug/g)</u>  |              |            |               |                  | <u>Ga (ug/g)</u> |              |            |               |                  |
| 3200             |              |            | CB            | 78TER 01         | 45.1             |              |            | OES           | 77FLA 01         |
| <u>Ce (ug/g)</u> |              |            |               |                  | <u>Hf (ug/g)</u> |              |            |               |                  |
| 57               | 29           |            | ITNA          | 77FLA 01         | 39.5             | 1.19         |            | ITNA          | 77FLA 01         |
| 60.7             |              |            | OES           | 77FLA 01         |                  |              |            |               |                  |
| <u>Co (ug/g)</u> |              |            |               |                  | <u>Hg (ng/g)</u> |              |            |               |                  |
| 3.3              | 0.06         |            | ITNA          | 77FLA 01         | 68               |              |            | FAA           | 75HEI 01         |
| 3.46             |              |            | OES           | 77FLA 01         | 159.2            | 6.22         |            | FAA           | 82FLA 01         |
| 4.4              |              |            | RTNA          | 61TUR 01         |                  |              |            |               |                  |
| <u>Cr (ug/g)</u> |              |            |               |                  | <u>La (ug/g)</u> |              |            |               |                  |
| 486              |              |            | OES           | 77FLA 01         |                  |              |            |               |                  |
| 500              |              |            | COLOR         | 57SHI 01         | <                | 14.7         | L          | OES           | 77FLA 01         |
| 540              |              |            | CHEM          | 57SHI 01         | 34               | 0.71         |            | ITNA          | 77FLA 01         |
| 576              | 14.4         |            | ITNA          | 77FLA 01         |                  |              |            |               |                  |
| 581              |              |            | RTNA          | 61TUR 01         |                  |              |            |               |                  |
| 639              |              |            | AA            | 80DON 01         |                  |              |            |               |                  |
| <u>Cs (ug/g)</u> |              |            |               |                  | <u>Lu (ug/g)</u> |              |            |               |                  |
| 2.4              | 0.08         |            | ITNA          | 77FLA 01         | 1074             |              |            | OES           | 77FLA 01         |
|                  |              |            |               |                  |                  |              |            |               |                  |
|                  |              |            |               |                  | 0.96             | 0.02         |            | ITNA          | 77FLA 01         |

TABLE 97-2: INDIVIDUAL DATA FOR NBS SRM 97 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mg (%)</u>    |       |     |        |           | <u>Si (%)</u>    |       |     |        |           |
| 0.13             |       |     | COLOR  | 57SHI 01  | 20               |       |     | TITR   | 77OHL 01  |
| 0.16             |       |     | CHEM   | 57SHI 01  |                  |       |     |        |           |
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Sm (ug/g)</u> |       |     |        |           |
| 16               |       |     | CHEM   | 57SHI 01  | <                | 4.64  | L   | OES    | 77FLA 01  |
| 35               |       |     | OES    | 64FIL 01  | 5.8              | 0.08  |     | ITNA   | 77FLA 01  |
| 99.7             |       |     | OES    | 77FLA 01  |                  |       |     |        |           |
| <u>Mo (ug/g)</u> |       |     |        |           | <u>Sn (ug/g)</u> |       |     |        |           |
| 2                |       |     | CHEM   | 57SHI 01  | 7                |       |     | OES    | 64FIL 01  |
|                  |       |     |        |           | 10.1             |       |     | OES    | 77FLA 01  |
| <u>Nb (ug/g)</u> |       |     |        |           | <u>Sr (ug/g)</u> |       |     |        |           |
| 35.6             |       |     | OES    | 77FLA 01  | 30               |       |     | RTNA   | 61TUR 01  |
|                  |       |     |        |           | 88               |       |     | OES    | 58GRA 01  |
|                  |       |     |        |           | 101              |       |     | OES    | 77FLA 01  |
| <u>Nd (ug/g)</u> |       |     |        |           | <u>Ta (ug/g)</u> |       |     |        |           |
| 19               |       |     | ITNA   | 77FLA 01  | 4.2              | 0.09  |     | ITNA   | 77FLA 01  |
| <u>Ni (ug/g)</u> |       |     |        |           | <u>Tb (ug/g)</u> |       |     |        |           |
| 32               |       |     | OES    | 64FIL 01  | 1.27             | 0.02  |     | ITNA   | 77FLA 01  |
| 36.8             |       |     | OES    | 77FLA 01  |                  |       |     |        |           |
| <u>Pb (ug/g)</u> |       |     |        |           | <u>Th (ug/g)</u> |       |     |        |           |
| 34.3             |       |     | OES    | 77FLA 01  | 37               | 0.48  |     | ITNA   | 77FLA 01  |
| 35               |       |     | FAA    | 79HEI 03  |                  |       |     |        |           |
| <u>Rb (ug/g)</u> |       |     |        |           | <u>Ti (%)</u>    |       |     |        |           |
| 24               | 1.6   |     | ITNA   | 77FLA 01  | 1.3              |       |     | COLOR  | 57SHI 01  |
|                  |       |     |        |           | 1.43             |       |     | CHEM   | 57SHI 01  |
|                  |       |     |        |           | 1.43             | 0.03  |     | TITR   | 84DAS 01  |
| <u>S (ug/g)</u>  |       |     |        |           | <u>V (ug/g)</u>  |       |     |        |           |
| 158              |       |     | CB     | 78TER 01  | 148              |       |     | OES    | 64FIL 01  |
| 170              |       |     | CB     | 55COL 01  | 205              |       |     | COLOR  | 57SHI 01  |
| 200              |       |     | TURB   | 73SHA 01  | 234              |       |     | CHEM   | 57SHI 01  |
|                  |       |     |        |           | 362              |       |     | OES    | 77FLA 01  |
| <u>Sb (ug/g)</u> |       |     |        |           | <u>Y (ug/g)</u>  |       |     |        |           |
| 1.4              | 0.11  |     | ITNA   | 77FLA 01  | 33               |       |     | OES    | 64FIL 01  |
|                  |       |     |        |           | 37.6             |       |     | OES    | 77FLA 01  |
| <u>Sc (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 12.1             |       |     | OES    | 77FLA 01  |                  |       |     |        |           |
| 20.7             | 0.17  |     | ITNA   | 77FLA 01  |                  |       |     |        |           |

TABLE 97-2: INDIVIDUAL DATA FOR NBS SRM 97 (cont.)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|
| <u>Yb (ug/g)</u> |              |            |               |                  |
| 6.8              | 0.17         |            | ITNA          | 77FLA 01         |
| 7.47             |              |            | OES           | 77FLA 01         |
| <u>Zn (ug/g)</u> |              |            |               |                  |
| 81               |              |            | XRF           | 65BAL 01         |
| 103              | 3.15         |            | ITNA          | 77FLA 01         |
| <u>Zr (ug/g)</u> |              |            |               |                  |
| 1390             | 34.8         |            | ITNA          | 77FLA 01         |

TABLE 97A-1: COMPILED DATA FOR NBS SRM 97A FLINT CLAY (revised 3/1/86)

| ELE | UNITS | NBS<br>Mean | CONSENSUS |        | RANGE       | NAA<br>Mean (n) | OTHER METHODS |        |          |        |
|-----|-------|-------------|-----------|--------|-------------|-----------------|---------------|--------|----------|--------|
|     |       |             | Mean ±    | SD (n) |             |                 | Mean (n)      | Method | Mean (n) | Method |
| Al  | %     | 20.52       | 20.84     | (1)    | ---         | 20.84 (1)       | ---           | ---    | ---      | ---    |
| As  | ug/g  | ---         | 3.53      | (1)    | ---         | ---             | 3.53 (1)      | AA     | ---      | ---    |
| B   | ug/g  | ---         | 69.4      | (1)    | ---         | ---             | 69.4 (1)      | OES    | ---      | ---    |
| Ba  | ug/g  | 670         | 660       | (1)    | ---         | 660 (1)         | ---           | ---    | ---      | ---    |
| Be  | ug/g  | ---         | 3.4       | (2)    | 3.2 - 3.55  | ---             | 3.55 (1)      | OES    | 3.2 (1)  | AA     |
| Bi  | ng/g  | ---         | 733       | (1)    | ---         | ---             | ---           | ---    | 733 (1)  | AA     |
| C   | ug/g  | ---         | 600       | (1)    | ---         | ---             | ---           | ---    | 600 (1)  | CB     |
| Ca  | ug/g  | 790         | ---       | ---    | ---         | ---             | ---           | ---    | ---      | ---    |
| Cd  | ng/g  | ---         | 16        | (1)    | ---         | ---             | ---           | ---    | 16 (1)   | AA     |
| Ce  | ug/g  | ---         | 160       | (2)    | 124 - 203   | 203 (1)         | 124 (1)       | OES    | ---      | ---    |
| Co  | ug/g  | ---         | 4.4       | (2)    | 4.1 - 4.64  | 4.1 (1)         | 4.64 (1)      | OES    | ---      | ---    |
| Cr  | ug/g  | 200         | 190       | (2)    | 180 - 203   | 180 (1)         | 203 (1)       | OES    | ---      | ---    |
| Cs  | ug/g  | ---         | 1.6       | (1)    | ---         | 1.6 (1)         | ---           | ---    | ---      | ---    |
| Cu  | ug/g  | ---         | 24.9      | (1)    | ---         | ---             | 24.9 (1)      | OES    | ---      | ---    |
| Dy  | ug/g  | ---         | 8.89      | (1)    | ---         | ---             | 8.89 (1)      | OES    | ---      | ---    |
| Eu  | ug/g  | ---         | 3.74      | (2)    | 3.66 - 3.81 | 3.81 (1)        | 3.66 (1)      | OES    | ---      | ---    |
| Fe  | ug/g  | 3140        | 3000      | (1)    | ---         | 3000 (1)        | ---           | ---    | ---      | ---    |
| Ga  | ug/g  | ---         | 31.6      | (1)    | ---         | ---             | 31.6 (1)      | OES    | ---      | ---    |
| Hf  | ug/g  | ---         | 13.4      | (2)    | 11.3 - 15.4 | 13.35 (2)       | ---           | ---    | ---      | ---    |
| Hg  | ng/g  | ---         | 388       | (1)    | ---         | ---             | ---           | ---    | 388 (1)  | AA     |
| K   | ug/g  | 4150        | ---       | ---    | ---         | ---             | ---           | ---    | ---      | ---    |
| LOI | %     | 13.32       | ---       | ---    | ---         | ---             | ---           | ---    | ---      | ---    |
| La  | ug/g  | ---         | 73        | (2)    | 43.7 - 103  | 103 (1)         | 43.7 (1)      | OES    | ---      | ---    |
| Li  | ug/g  | 510         | 439       | (1)    | ---         | ---             | 439 (1)       | OES    | ---      | ---    |
| Lu  | ug/g  | ---         | 0.98      | (1)    | ---         | 0.98 (1)        | ---           | ---    | ---      | ---    |
| Mg  | ug/g  | 900         | ---       | ---    | ---         | ---             | ---           | ---    | ---      | ---    |
| Mn  | ug/g  | ---         | 5.24      | (1)    | ---         | ---             | 5.24 (1)      | OES    | ---      | ---    |
| Na  | ug/g  | 275         | ---       | ---    | ---         | ---             | ---           | ---    | ---      | ---    |
| Nb  | ug/g  | ---         | 39        | (1)    | ---         | ---             | 39 (1)        | OES    | ---      | ---    |
| Nd  | ug/g  | ---         | 88        | (1)    | ---         | 88 (1)          | ---           | ---    | ---      | ---    |
| Ni  | ug/g  | ---         | 81        | (1)    | ---         | ---             | 81 (1)        | OES    | ---      | ---    |
| P   | ug/g  | 1570        | 845 ?     | (2)    | 160 - 1530  | ---             | 160 (1)       | ICPES  | 1530 (1) | COLOR  |
| Pb  | ug/g  | ---         | 40.15     | (2)    | 38.6 - 41.7 | ---             | 41.7 (1)      | OES    | 38.6 (1) | AA     |
| Rb  | ug/g  | ---         | < 20      | ---    | ---         | < 20            | ---           | ---    | ---      | ---    |
| S   | ug/g  | ---         | 308       | (1)    | ---         | ---             | ---           | ---    | 308 (1)  | CB     |
| Sb  | ng/g  | ---         | 800       | (2)    | 800 - 800   | 800 (1)         | ---           | ---    | 800 (1)  | AA     |
| Sc  | ug/g  | ---         | 26        | (2)    | 21.3 - 31.3 | 31.3 (1)        | 21.3 (1)      | OES    | ---      | ---    |
| Si  | %     | 20.39       | 20.7      | (1)    | ---         | 20.7 (1)        | ---           | ---    | ---      | ---    |
| Sm  | ug/g  | ---         | 14        | (2)    | 6.88 - 21.3 | 21.3 (1)        | 6.88 (1)      | OES    | ---      | ---    |
| Sn  | ug/g  | ---         | 6.5 ± 0.4 | (3)    | 6.16 - 6.9  | ---             | 6.53 (1)      | OES    | 6.53 (2) | AA     |
| Sr  | ug/g  | 1500        | 860       | (1)    | ---         | ---             | 860 (1)       | OES    | ---      | ---    |
| Ta  | ug/g  | ---         | 3.21      | (1)    | ---         | 3.21 (1)        | ---           | ---    | ---      | ---    |
| Tb  | ug/g  | ---         | 2.77      | (1)    | ---         | 2.77 (1)        | ---           | ---    | ---      | ---    |
| Th  | ug/g  | ---         | 31.1      | (1)    | ---         | 31.1 (1)        | ---           | ---    | ---      | ---    |
| Ti  | %     | 1.14        | ---       | ---    | ---         | ---             | ---           | ---    | ---      | ---    |
| U   | ug/g  | ---         | 6.58      | (1)    | ---         | 6.58 (1)        | ---           | ---    | ---      | ---    |
| V   | ug/g  | ---         | 362       | (1)    | ---         | ---             | 362 (1)       | OES    | ---      | ---    |
| Y   | ug/g  | ---         | 121       | (1)    | ---         | ---             | 121 (1)       | OES    | ---      | ---    |
| Yb  | ug/g  | ---         | 8.9       | (2)    | 7.7 - 10.1  | 7.7 (1)         | 10.1 (1)      | OES    | ---      | ---    |
| Zn  | ug/g  | ---         | < 20      | ---    | ---         | < 20            | ---           | ---    | ---      | ---    |
| Zr  | ug/g  | 470         | 522       | (2)    | 465 - 580   | 522 (2)         | ---           | ---    | ---      | ---    |

TABLE 97A-2: INDIVIDUAL DATA FOR NBS SRM 97A (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>    |       |     |        |           | <u>Cs (ug/g)</u> |       |     |        |           |
| 20.84            | 2     |     | IENA   | 84CEL 01  | 1.6              | 0.6   |     | ITNA   | 77FLA 01  |
| <u>As (ug/g)</u> |       |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| 3.53             |       |     | HAA    | 84TER 04  | 24.9             |       |     | OES    | 77FLA 01  |
| <u>B (ug/g)</u>  |       |     |        |           | <u>Dy (ug/g)</u> |       |     |        |           |
| 69.4             |       |     | OES    | 77FLA 01  | 8.89             |       |     | OES    | 77FLA 01  |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Eu (ug/g)</u> |       |     |        |           |
| 660              | 20.6  |     | ITNA   | 77FLA 01  | 3.66             |       |     | OES    | 77FLA 01  |
| <u>Be (ug/g)</u> |       |     |        |           | 3.81             | 0.02  |     | ITNA   | 77FLA 01  |
| 3.2              |       |     | AA     | 82TER 02  | <u>Fe (ug/g)</u> |       |     |        |           |
| 3.2              |       | D   | AA     | 83TER 01  | 3000             | 30    |     | ITNA   | 77FLA 01  |
| 3.55             |       |     | OES    | 77FLA 01  | <u>Ga (ug/g)</u> |       |     |        |           |
| <u>Bi (ng/g)</u> |       |     |        |           | 31.6             |       |     | OES    | 77FLA 01  |
| 733              |       | D   | FAA    | 84TER 03  | <u>Hf (ug/g)</u> |       |     |        |           |
| 733              |       |     | HAA    | 84TER 02  | 11.3             | 0.39  |     | ITNA   | 77FLA 01  |
| <u>C (ug/g)</u>  |       |     |        |           | 15.4             |       |     | RTNA   | 76GAN 01  |
| 600              |       |     | CB     | 78TER 01  | <u>Hg (ng/g)</u> |       |     |        |           |
| <u>Cd (ng/g)</u> |       |     |        |           | 387.5            | 22.5  |     | FAA    | 82FLA 01  |
| < 16             | 200   |     | ICPES  | 83UCH 02  | <u>La (ug/g)</u> |       |     |        |           |
|                  |       |     | AA     | 84TER 01  | 43.7             |       |     | OES    | 77FLA 01  |
| <u>Ce (ug/g)</u> |       |     |        |           | 103              | 1.83  |     | ITNA   | 77FLA 01  |
| 124              |       |     | OES    | 77FLA 01  | <u>Li (ug/g)</u> |       |     |        |           |
| 203              | 3.51  |     | ITNA   | 77FLA 01  | 439              |       |     | OES    | 77FLA 01  |
| <u>Co (ug/g)</u> |       |     |        |           | <u>Lu (ug/g)</u> |       |     |        |           |
| 4.1              | 0.08  |     | ITNA   | 77FLA 01  | 0.98             | 0.04  |     | ITNA   | 77FLA 01  |
| 4.64             |       |     | OES    | 77FLA 01  | <u>Mn (ug/g)</u> |       |     |        |           |
| <u>Cr (ug/g)</u> |       |     |        |           | 5.24             |       |     | OES    | 77FLA 01  |
| 180              | 4.1   |     | ITNA   | 77FLA 01  |                  |       |     |        |           |
| 203              |       |     | OES    | 77FLA 01  |                  |       |     |        |           |

TABLE 97A-2: INDIVIDUAL DATA FOR NBS SRM 97A (cont.)

| Conc             | Uncer  | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|--------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Nb (ug/g)</u> |        |     |        |           | <u>Sn (ug/g)</u> |       |     |        |           |
| 39               |        |     | OES    | 77FLA 01  | 6.16             |       |     | AA     | 82TER 01  |
|                  |        |     |        |           | 6.53             |       |     | OES    | 77FLA 01  |
| <u>Nd (ug/g)</u> |        |     |        |           | 6.9              | 0.28  |     | FAA    | 85TER 01  |
| 88               | 3.7    |     | ITNA   | 77FLA 01  | <u>Sr (ug/g)</u> |       |     |        |           |
| <u>Ni (ug/g)</u> |        |     |        |           | 860              |       |     | OES    | 77FLA 01  |
| 81               |        |     | OES    | 77FLA 01  | <u>Ta (ug/g)</u> |       |     |        |           |
| <u>P (%)</u>     |        |     |        |           | 3.21             | 0.06  |     | ITNA   | 77FLA 01  |
| 0.016            | 0.0001 |     | ICPES  | 83UCH 01  | <u>Tb (ug/g)</u> |       |     |        |           |
| 0.153            | 0.001  |     | COLOR  | 83UCH 01  | 2.77             | 0.08  |     | ITNA   | 77FLA 01  |
| <u>Pb (ug/g)</u> |        |     |        |           | <u>Th (ug/g)</u> |       |     |        |           |
| 38.6             |        |     | AA     | 84TER 01  | 31.1             | 0.37  |     | ITNA   | 77FLA 01  |
| 41.7             |        |     | OES    | 77FLA 01  | <u>U (ug/g)</u>  |       |     |        |           |
| <u>Rb (ug/g)</u> |        |     |        |           | 6.58             |       |     | RTNA   | 76GAN 01  |
| <                | 20     | L   | ITNA   | 77FLA 01  | <u>V (ug/g)</u>  |       |     |        |           |
| <u>S (ug/g)</u>  |        |     |        |           | 362              |       |     | OES    | 77FLA 01  |
| 308              |        |     | CB     | 78TER 01  | <u>Y (ug/g)</u>  |       |     |        |           |
| <u>Sb (ng/g)</u> |        |     |        |           | 121              |       |     | OES    | 77FLA 01  |
| 800              |        |     | HAA    | 84TER 04  | <u>Yb (ug/g)</u> |       |     |        |           |
| 800              | 100    |     | ITNA   | 77FLA 01  | 7.7              | 0.23  |     | ITNA   | 77FLA 01  |
| <u>Sc (ug/g)</u> |        |     |        |           | 10.1             |       |     | OES    | 77FLA 01  |
| 21.3             |        |     | OES    | 77FLA 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| 31.3             | 0.75   |     | ITNA   | 77FLA 01  | <                | 20    | L   | ITNA   | 77FLA 01  |
| <u>Si (%)</u>    |        |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
| 20.7             | 1      |     | IENA   | 84CEL 01  | 465              | 19    |     | RTNA   | 76GAN 01  |
| <u>Sm (ug/g)</u> |        |     |        |           | 580              | 21    |     | ITNA   | 77FLA 01  |
| 6.88             |        |     | OES    | 77FLA 01  |                  |       |     |        |           |
| 21.3             | 0.69   |     | ITNA   | 77FLA 01  |                  |       |     |        |           |

TABLE 98-1: COMPILED DATA FOR NBS SRM 98 PLASTIC CLAY (revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS    |     | MEDIAN | RANGE         | NAA      |               | OES      |           | OTHER METHODS |  |
|---------|-------|-------------|--------------|-----|--------|---------------|----------|---------------|----------|-----------|---------------|--|
|         |       |             | Mean ± SD    | (n) |        |               | Mean (n) | Mean ± SD (n) | Mean (n) | Method    |               |  |
| Al      | %     | 13.51       | 13.53 ± 0.07 | (5) | 13.5   | 13.48 - 13.65 | ---      | 13.5          | (1)      | 13.50 (2) | CHEM          |  |
| Al      | %     | ---         | ---          | --- | ---    | ---           | ---      | ---           | ---      | 13.65 (1) | COLOR         |  |
| Al      | %     | ---         | ---          | --- | ---    | ---           | ---      | ---           | ---      | 13.48 (1) | TITR          |  |
| B       | ug/g  | ---         | 140 ± 80     | (4) | 78.5   | 68 - 250      | ---      | 140 ± 80      | (4)      | ---       | ---           |  |
| Ba      | ug/g  | ---         | 680 ± 115    | (3) | 670    | 570 - 800     | 670 (1)  | 685           | (2)      | ---       | ---           |  |
| Be      | ug/g  | ---         | 4.1          | (1) | ---    | ---           | ---      | 4.1           | (1)      | ---       | ---           |  |
| C       | ug/g  | ---         | 4000         | (1) | ---    | ---           | ---      | ---           | ---      | 4000 (1)  | CB            |  |
| Ca      | ug/g  | 1500        | 1530 ± 60    | (3) | 1500   | 1500 - 1600   | ---      | 1500          | (1)      | 1600 (1)  | TITR          |  |
| Ca      | ug/g  | ---         | ---          | --- | ---    | ---           | ---      | ---           | ---      | 1500 (1)  | CHEM          |  |
| Ce      | ug/g  | ---         | 127          | (2) | ---    | 119 - 135     | 135 (1)  | 119           | (1)      | ---       | ---           |  |
| Co      | ug/g  | ---         | 15.8 ± 1.4   | (5) | 16.5   | 13.8 - 17     | 15.2 (2) | 16.3 ± 1.1    | (3)      | ---       | ---           |  |
| Cr      | ug/g  | 140         | 138 ± 18     | (8) | 136    | 113 - 170     | 122 (2)  | 135 ± 16      | (3)      | 170 (1)   | COLOR         |  |
| Cr      | ug/g  | ---         | ---          | --- | ---    | ---           | ---      | ---           | ---      | 144 (1)   | CHEM          |  |
| Cr      | ug/g  | ---         | ---          | --- | ---    | ---           | ---      | ---           | ---      | 143 (1)   | AA            |  |
| Cs      | ug/g  | ---         | 10.7         | (1) | ---    | ---           | 10.7 (1) | ---           | ---      | ---       | ---           |  |
| Cu      | ug/g  | 72          | 64 ± 24      | (6) | 70     | 33.7 - 100    | ---      | 60 ± 30       | (4)      | 70 (1)    | COLOR         |  |
| Cu      | ug/g  | ---         | ---          | --- | ---    | ---           | ---      | ---           | ---      | 72 (1)    | CHEM          |  |
| Dy      | ug/g  | ---         | 7.07         | (1) | ---    | ---           | ---      | 7.07          | (1)      | ---       | ---           |  |
| Eu      | ug/g  | ---         | 1.90         | (2) | ---    | 1.74 - 2.07   | 1.74 (1) | 2.07          | (1)      | ---       | ---           |  |
| Fe      | %     | 1.43        | 1.32 ± 0.13  | (6) | 1.38   | 1.12 - 1.43   | 1.4 (1)  | 1.17          | (1)      | 1.39 (2)  | COLOR         |  |
| Fe      | %     | ---         | ---          | --- | ---    | ---           | ---      | ---           | ---      | 1.28 (2)  | CHEM          |  |
| Ga      | ug/g  | ---         | 52           | (2) | ---    | 24.1 - 80     | ---      | 52            | (2)      | ---       | ---           |  |
| Hf      | ug/g  | ---         | 7            | (1) | ---    | ---           | 7 (1)    | ---           | ---      | ---       | ---           |  |
| Hg      | ng/g  | ---         | 463          | (1) | ---    | ---           | ---      | ---           | ---      | 463 (1)   | AA            |  |
| K       | %     | 2.63        | ---          | --- | ---    | ---           | ---      | ---           | ---      | ---       | ---           |  |
| LOI     | %     | 7.28        | ---          | --- | ---    | ---           | ---      | ---           | ---      | ---       | ---           |  |
| La      | ug/g  | ---         | 95 ± 50      | (3) | 79     | 55.2 - 150    | 79 (1)   | 103           | (2)      | ---       | ---           |  |
| Li      | ug/g  | 140         | 144          | (1) | ---    | ---           | ---      | 144           | (1)      | ---       | ---           |  |
| Lu      | ng/g  | ---         | 650          | (1) | ---    | ---           | 650 (1)  | ---           | ---      | ---       | ---           |  |

TABLE 98-1: COMPILED DATA FOR NBS SRM 98 PLASTIC CLAY (cont.)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS        |     | MEDIAN | RANGE        | NAA      |                | OES          |        | OTHER METHODS |       |      |
|---------|-------|-------------|------------------|-----|--------|--------------|----------|----------------|--------------|--------|---------------|-------|------|
|         |       |             | Mean $\pm$ SD    | (n) |        |              | Mean (n) | Mean $\pm$ SD  | Mean (n)     | Method |               |       |      |
| Mg      | ug/g  | 4340        | 4300 $\pm$ 190   | (5) | 4300   | 4100 - 4600  | ---      | 4200           | (1)          | 4300   | (2)           | CHEM  |      |
| Mg      | ug/g  | ---         | ---              | --- | ---    | ---          | ---      | ---            | ---          | 4100   | (1)           | TITR  |      |
| Mg      | ug/g  | ---         | ---              | --- | ---    | ---          | ---      | ---            | ---          | 4600   | (1)           | COLOR |      |
| Mn      | ug/g  | 39          | 69 $\pm$ 33      | (6) | 58.8   | 39 - 100     | ---      | 84 $\pm$ 30    | (4)          | 39.5   | (2)           | CHEM  |      |
| Mo      | ug/g  | ---         | 1.0              | (1) | ---    | ---          | ---      | ---            | ---          | 1.0    | (1)           | CHEM  |      |
| Na      | ug/g  | 1930        | ---              | --- | ---    | ---          | ---      | ---            | ---          | ---    | ---           | ---   |      |
| Nd      | ug/g  | ---         | 49               | (1) | ---    | ---          | 49       | (1)            | ---          | ---    | ---           | ---   |      |
| Ni      | ug/g  | ---         | 44 $\pm$ 8       | (3) | 40     | 39 - 52.8    | ---      | 44 $\pm$ 8     | (3)          | ---    | ---           | ---   |      |
| P       | ug/g  | 350         | 370              | (2) | ---    | 350 - 390    | ---      | ---            | ---          | 370    | (2)           | COLOR |      |
| Pb      | ug/g  | ---         | 44               | (2) | ---    | 40 - 47.5    | ---      | 44             | (2)          | ---    | ---           | ---   |      |
| Rb      | ug/g  | ---         | 154              | (1) | ---    | ---          | 154      | (1)            | ---          | ---    | ---           | ---   |      |
| S       | ug/g  | 280         | 270 $\pm$ 25     | (3) | 270    | 250 - 300    | ---      | ---            | ---          | 260    | (2)           | CB    |      |
| S       | ug/g  | ---         | ---              | --- | ---    | ---          | ---      | ---            | ---          | 300    | (1)           | TURB  |      |
| Sb      | ug/g  | ---         | 1.3              | (1) | ---    | ---          | 1.3      | (1)            | ---          | ---    | ---           | ---   |      |
| Sc      | ug/g  | ---         | 25 $\pm$ 4       | (3) | 27.09  | 22.1 - 30    | 22.9     | (1)            | 26           | (2)    | ---           | ---   |      |
| Se      | ug/g  | ---         | 1.20 $\pm$ 0.16  | (3) | 1.2    | 1.04 - 1.37  | ---      | ---            | ---          | 1.04   | (1)           | FLUOR |      |
| Si      | %     | 27.6        | 27.60 $\pm$ 0.01 | (3) | 27.6   | 27.59 - 27.6 | ---      | ---            | 27.6         | (1)    | 27.6          | (1)   | CHEM |
| Si      | %     | ---         | ---              | --- | ---    | ---          | ---      | ---            | ---          | 27.59  | (1)           | TITR  |      |
| Sm      | ug/g  | ---         | 8.3              | (2) | ---    | 6.3 - 10.3   | 10.3     | (1)            | 6.3          | (1)    | ---           | ---   |      |
| Sn      | ug/g  | ---         | 6.47             | (1) | ---    | ---          | ---      | ---            | 6.47         | (1)    | ---           | ---   |      |
| Sr      | ug/g  | ---         | 290 $\pm$ 70     | (5) | 300    | 205 - 390    | 205      | (1)            | 310 $\pm$ 70 | (4)    | ---           | ---   |      |
| Ta      | ug/g  | ---         | 2.22             | (1) | ---    | ---          | 2.22     | (1)            | ---          | ---    | ---           | ---   |      |
| Tb      | ug/g  | ---         | 1.35             | (1) | ---    | ---          | 1.35     | (1)            | ---          | ---    | ---           | ---   |      |
| Th      | ug/g  | ---         | 19.5             | (1) | ---    | ---          | 19.5     | (1)            | ---          | ---    | ---           | ---   |      |
| Ti      | ug/g  | 8560        | 9000 $\pm$ 600   | (6) | 8690   | 8400 - 10000 | ---      | 9200 $\pm$ 700 | (3)          | 9300   | (1)           | COLOR |      |
| Ti      | ug/g  | ---         | ---              | --- | ---    | ---          | ---      | ---            | ---          | 8500   | (2)           | CHEM  |      |
| V       | ug/g  | 140         | 180 $\pm$ 80     | (8) | 140    | 106 - 310    | ---      | 210 $\pm$ 100  | (5)          | 140    | (2)           | CHEM  |      |
| V       | ug/g  | ---         | ---              | --- | ---    | ---          | ---      | ---            | ---          | 161    | (1)           | COLOR |      |
| Y       | ug/g  | ---         | 38 $\pm$ 9       | (3) | 40     | 28 - 46.7    | ---      | 38 $\pm$ 9     | (3)          | ---    | ---           | ---   |      |
| Yb      | ug/g  | ---         | 11 $\pm$ 9       | (3) | 6.8    | 4.9 - 21.2   | 4.9      | (1)            | 14           | (2)    | ---           | ---   |      |
| Zn      | ug/g  | ---         | 125              | (1) | ---    | ---          | 125      | (1)            | ---          | ---    | ---           | ---   |      |
| Zr      | ug/g  | 300         | 300 $\pm$ 60     | (6) | 300    | 190 - 377    | 340      | (1)            | 280 $\pm$ 80 | (4)    | 300           | (1)   | CHEM |

TABLE 98-2: INDIVIDUAL DATA FOR NBS SRM 98 (revised 3/1/86)

| Conc             | Uncer | Com  | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|------|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>    |       |      |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| 13.48            |       |      | TITR   | 58WAT 01  | 113              | 2.33  |     | ITNA   | 77FLA 01  |
| 13.5             |       |      | CHEM   | 62JOE 01  | 119              |       |     | OES    | 64FIL 01  |
| 13.5             |       |      | OES    | 62JOE 01  | 130              |       |     | RTNA   | 61TUR 01  |
| 13.51            |       |      | CHEM   | 57SHI 01  | 136              |       |     | OES    | 77FLA 01  |
| 13.65            |       |      | COLOR  | 57SHI 01  | 143              |       |     | AA     | 80DON 01  |
|                  |       |      |        |           | 144              |       |     | CHEM   | 57SHI 01  |
|                  |       |      |        |           | 150              |       | 3   | OES    | 63CLA 01  |
|                  |       |      |        |           | 170              |       |     | COLOR  | 57SHI 01  |
|                  |       |      | OES    | 64FIL 01  | 250              |       | 3   | OES    | 63CLA 01  |
|                  |       |      | OES    | 77FLA 01  | 1400             |       |     | CHEM   | 62JOE 01  |
|                  |       | 3    | OES    | 63CLA 01  | 1600             |       |     | OES    | 62JOE 01  |
|                  |       | 3    | OES    | 63CLA 01  |                  |       |     |        |           |
| <u>Ba (ug/g)</u> |       |      |        |           | <u>Cs (ug/g)</u> |       |     |        |           |
|                  |       |      |        |           | 10.7             | 0.17  |     | ITNA   | 77FLA 01  |
| 570              |       |      | OES    | 58GRA 01  |                  |       |     |        |           |
| 670              | 10.8  |      | ITNA   | 77FLA 01  | <u>Cu (ug/g)</u> |       |     |        |           |
| 800              |       |      | OES    | 63CLA 01  | 33.7             |       |     | OES    | 77FLA 01  |
|                  |       |      |        |           | 39               |       |     | OES    | 64FIL 01  |
|                  |       |      |        |           | 70               |       | 3   | OES    | 63CLA 01  |
|                  |       |      | OES    | 77FLA 01  | 70               |       |     | COLOR  | 57SHI 01  |
|                  |       |      |        |           | 72               |       |     | CHEM   | 57SHI 01  |
|                  |       |      |        |           | 100              |       | 3   | OES    | 63CLA 01  |
|                  |       |      |        |           | <u>Dy (ug/g)</u> |       |     |        |           |
|                  |       |      | CB     | 78TER 01  | 7.07             |       |     | OES    | 77FLA 01  |
|                  |       |      |        |           | <u>Eu (ug/g)</u> |       |     |        |           |
|                  |       |      | OES    | 62JOE 01  | 1.74             | 0.02  |     | ITNA   | 77FLA 01  |
|                  |       |      | CHEM   | 62JOE 01  | 2.07             |       |     | OES    | 77FLA 01  |
|                  |       |      | TITR   | 80HIT 02  |                  |       |     |        |           |
|                  |       |      |        |           | <u>Fe (%)</u>    |       |     |        |           |
|                  |       |      | OES    | 77FLA 01  | 1.12             |       |     | CHEM   | 62JOE 01  |
|                  |       | 1.32 | ITNA   | 77FLA 01  | 1.17             |       |     | OES    | 62JOE 01  |
|                  |       |      |        |           | 1.38             | 0.01  |     | COLOR  | 59COL 01  |
|                  |       |      |        |           | 1.4              |       |     | COLOR  | 57SHI 01  |
|                  |       |      | ITNA   | 77FLA 01  | 1.4              | 0.05  |     | ITNA   | 77FLA 01  |
|                  |       |      | OES    | 63CLA 01  | 1.43             |       |     | CHEM   | 57SHI 01  |
|                  |       |      | RTNA   | 61TUR 01  | <u>Ga (ug/g)</u> |       |     |        |           |
|                  |       |      | OES    | 77FLA 01  |                  |       |     |        |           |
|                  |       |      | OES    | 64FIL 01  |                  |       |     |        |           |
|                  |       |      |        |           | <                | 100   | L   | OES    | 63CLA 01  |
|                  |       |      |        |           | 24.1             |       |     | OES    | 77FLA 01  |
|                  |       |      |        |           | 80               |       | 3   | OES    | 63CLA 01  |

TABLE 98-2: INDIVIDUAL DATA FOR NBS SRM 98 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Hf (ug/g)</u> |       |     |        |           | <u>P (ug/g)</u>  |       |     |        |           |
| 7                | 0.42  |     | ITNA   | 77FLA 01  | 350              |       | 11  | COLOR  | 76WHI 01  |
|                  |       |     |        |           | 390              |       | 11  | COLOR  | 76WHI 01  |
| <u>Hg (ng/g)</u> |       |     |        |           | <u>Pb (ug/g)</u> |       |     |        |           |
| 462.6            | 12.1  |     | FAA    | 82FLA 01  | 40               |       |     | OES    | 63CLA 01  |
| <u>La (ug/g)</u> |       |     |        |           | <u>Rb (ug/g)</u> |       |     |        |           |
| 55.2             |       |     | OES    | 77FLA 01  | 47.5             |       |     | OES    | 77FLA 01  |
| 79               | 1.7   |     | ITNA   | 77FLA 01  | <u>S (ug/g)</u>  |       |     |        |           |
| 150              |       |     | OES    | 63CLA 01  | 154              | 1.12  |     | ITNA   | 77FLA 01  |
| <u>Li (ug/g)</u> |       |     |        |           | <u>Sb (ug/g)</u> |       |     |        |           |
| 144              |       |     | OES    | 77FLA 01  | 1.3              | 0.12  |     | ITNA   | 77FLA 01  |
| <u>Lu (ng/g)</u> |       |     |        |           | <u>Sc (ug/g)</u> |       |     |        |           |
| 650              |       |     | ITNA   | 77FLA 01  | 22.1             |       |     | OES    | 77FLA 01  |
| <u>Mg (ug/g)</u> |       |     |        |           | <u>Se (ug/g)</u> |       |     |        |           |
| 4100             |       |     | TITR   | 80HIT 02  | 22.9             | 0.06  |     | ITNA   | 77FLA 01  |
| 4200             |       |     | OES    | 62JOE 01  | 30               |       |     | OES    | 63CLA 01  |
| 4300             |       |     | CHEM   | 62JOE 01  | <u>Si (%)</u>    |       |     |        |           |
| 4300             |       |     | CHEM   | 57SHI 01  | 1.04             | 0.08  |     | FLUOR  | 74CRE 01  |
| 4600             |       |     | COLOR  | 57SHI 01  | 1.2              |       |     | UU     | 74WAH 01  |
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Sm (ug/g)</u> |       |     |        |           |
| 39               |       |     | OES    | 64FIL 01  | 1.37             |       |     | UU     | 65WEL 01  |
| 39               |       |     | CHEM   | 57SHI 01  | <u>Si (%)</u>    |       |     |        |           |
| 40               |       |     | CHEM   | 62JOE 01  | 27.59            |       |     | TITR   | 77OHL 01  |
| 96.5             |       |     | OES    | 77FLA 01  | 27.6             |       |     | CHEM   | 62JOE 01  |
| 100              |       | 3   | OES    | 63CLA 01  | 27.6             |       |     | OES    | 62JOE 01  |
| 100              |       | 3   | OES    | 63CLA 01  | <u>Sm (ug/g)</u> |       |     |        |           |
| <u>Mo (ug/g)</u> |       |     |        |           | <u>Sn (ug/g)</u> |       |     |        |           |
| < 1              | 1     | L   | OES    | 63CLA 01  | 6.3              |       |     | OES    | 77FLA 01  |
| 1                |       |     | CHEM   | 57SHI 01  | 10.3             | 0.42  |     | ITNA   | 77FLA 01  |
| <u>Nd (ug/g)</u> |       |     |        |           | <u>Sn (ug/g)</u> |       |     |        |           |
| 49               | 0.58  |     | ITNA   | 77FLA 01  | 6.47             |       |     | OES    | 77FLA 01  |
| <u>Ni (ug/g)</u> |       |     |        |           | <u>Sn (ug/g)</u> |       |     |        |           |
| 39               |       |     | OES    | 64FIL 01  | <u>Sn (ug/g)</u> |       |     |        |           |
| 40               |       |     | OES    | 63CLA 01  | <u>Sn (ug/g)</u> |       |     |        |           |
| 52.8             |       |     | OES    | 77FLA 01  | <u>Sn (ug/g)</u> |       |     |        |           |

TABLE 98-2: INDIVIDUAL DATA FOR NBS SRM 98 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sr (ug/g)</u> |       |     |        |           | <u>V (ug/g)</u>  |       |     |        |           |
| 205              |       |     | RTNA   | 61TUR 01  | 106              |       |     | OES    | 64FIL 01  |
| 230              |       |     | OES    | 58GRA 01  | 120              |       |     | OES    | 62JOE 01  |
| 300              |       |     | OES    | 63CLA 01  | 140              |       |     | CHEM   | 62JOE 01  |
| 326              |       |     | OES    | 77FLA 01  | 140              |       |     | CHEM   | 57SHI 01  |
| 390              |       |     | OES    | 75THO 01  | 161              |       |     | COLOR  | 57SHI 01  |
| <u>Ta (ug/g)</u> |       |     |        |           | 200              |       | 3   | OES    | 63CLA 01  |
| 2.22             | 0.03  |     | ITNA   | 77FLA 01  | 300              |       | 3   | OES    | 63CLA 01  |
| <u>Tb (ug/g)</u> |       |     |        |           | 310              |       |     | OES    | 77FLA 01  |
| 1.35             | 0.02  |     | ITNA   | 77FLA 01  | <u>Y (ug/g)</u>  |       |     |        |           |
| <u>Th (ug/g)</u> |       |     |        |           | 28               |       |     | OES    | 64FIL 01  |
| 19.5             | 0.21  |     | ITNA   | 77FLA 01  | 40               |       |     | OES    | 63CLA 01  |
| <u>Ti (ug/g)</u> |       |     |        |           | 46.7             |       |     | OES    | 77FLA 01  |
| 8400             |       |     | CHEM   | 62JOE 01  | <u>Yb (ug/g)</u> |       |     |        |           |
| 8600             |       |     | CHEM   | 57SHI 01  | 4.9              | 0.1   |     | ITNA   | 77FLA 01  |
| 8690             |       |     | OES    | 62JOE 01  | 6.8              |       |     | OES    | 77FLA 01  |
| 9000             |       | 3   | OES    | 63CLA 01  | 21.2             |       |     | OES    | 77FLA 01  |
| 9300             |       |     | COLOR  | 57SHI 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| 10000            |       | 3   | OES    | 63CLA 01  | 125              | 2.1   |     | ITNA   | 77FLA 01  |
| <u>Ti (ug/g)</u> |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
| 8400             |       |     | CHEM   | 62JOE 01  | 190              |       |     | OES    | 64FIL 01  |
| 8600             |       |     | CHEM   | 57SHI 01  | 270              |       |     | OES    | 62JOE 01  |
| 8690             |       |     | OES    | 62JOE 01  | 300              |       |     | OES    | 63CLA 01  |
| 9000             |       | 3   | OES    | 63CLA 01  | 300              |       |     | CHEM   | 62JOE 01  |
| 9300             |       |     | COLOR  | 57SHI 01  | 340              | 19.6  |     | ITNA   | 77FLA 01  |
| 10000            |       | 3   | OES    | 63CLA 01  | 377              |       |     | OES    | 77FLA 01  |

TABLE 98A-1: COMPILED DATA FOR NBS SRM 98A PLASTIC CLAY (revised 3/1/86)

| ELEMENT | UNITS | NBS   | CONSENSUS |     | RANGE       | NAA       | OES      |          | OTHER METHODS |     |
|---------|-------|-------|-----------|-----|-------------|-----------|----------|----------|---------------|-----|
|         |       | Mean  | Mean ± SD | (n) |             | Mean (n)  | Mean (n) | Mean (n) | Method        |     |
| Al      | %     | 17.56 | 17.42     | (1) | ---         | 17.42 (1) | ---      | ---      | ---           |     |
| As      | ug/g  | ---   | 11.4      | (1) | ---         | ---       | ---      | ---      | 11.4 (1)      | AA  |
| B       | ug/g  | ---   | 120       | (1) | ---         | ---       | 120 (1)  | ---      | ---           |     |
| Ba      | ug/g  | 270   | 320       | (2) | 168 - 480   | 480 (1)   | 168 (1)  | ---      | ---           |     |
| Be      | ug/g  | ---   | 5.4       | (2) | 4.8 - 5.93  | ---       | 5.93 (1) | ---      | 4.8 (1)       | AA  |
| Bi      | ng/g  | ---   | 790       | (1) | ---         | ---       | ---      | ---      | 790 (1)       | AA  |
| C       | ug/g  | ---   | 8100      | (1) | ---         | ---       | ---      | ---      | 8100 (1)      | CB  |
| Ca      | ug/g  | 2200  | ---       |     | ---         | ---       | ---      | ---      | ---           |     |
| Cd      | ng/g  | ---   | 47        | (1) | ---         | ---       | ---      | ---      | 47 (1)        | AA  |
| Ce      | ug/g  | ---   | 200       | (2) | 180 - 219   | 219 (1)   | 180 (1)  | ---      | ---           |     |
| Co      | ug/g  | ---   | 13        | (2) | 11.5 - 14.4 | 11.5 (1)  | 14.4 (1) | ---      | ---           |     |
| Cr      | ug/g  | 200   | 223       | (2) | 212 - 234   | 212 (1)   | 234 (1)  | ---      | ---           |     |
| Cs      | ug/g  | ---   | 6.2       | (1) | ---         | 6.2 (1)   | ---      | ---      | ---           |     |
| Cu      | ug/g  | ---   | 121       | (1) | ---         | ---       | 121 (1)  | ---      | ---           |     |
| Dy      | ug/g  | ---   | 17.5      | (1) | ---         | ---       | 17.5 (1) | ---      | ---           |     |
| Eu      | ug/g  | ---   | 3.35      | (2) | 3.18 - 3.52 | 3.18 (1)  | 3.52 (1) | ---      | ---           |     |
| Fe      | ug/g  | 9370  | 8800      | (1) | ---         | 8800 (1)  | ---      | ---      | ---           |     |
| Ga      | ug/g  | ---   | 23.3      | (1) | ---         | ---       | 23.3 (1) | ---      | ---           |     |
| Hf      | ug/g  | ---   | 7.3       | (1) | ---         | 7.3 (1)   | ---      | ---      | ---           |     |
| Hg      | ng/g  | ---   | 39.3      | (1) | ---         | ---       | ---      | ---      | 39.3 (1)      | AA  |
| K       | ug/g  | 8630  | ---       |     | ---         | ---       | ---      | ---      | ---           |     |
| LOI     | %     | 12.44 | ---       |     | ---         | ---       | ---      | ---      | ---           |     |
| La      | ug/g  | ---   | 130       | (2) | 91.7 - 162  | 162 (1)   | 91.7 (1) | ---      | ---           |     |
| Li      | ug/g  | 325   | 291       | (1) | ---         | ---       | 291 (1)  | ---      | ---           |     |
| Lu      | ug/g  | ---   | 1.15      | (1) | ---         | 1.15 (1)  | ---      | ---      | ---           |     |
| Mg      | ug/g  | 2500  | ---       |     | ---         | ---       | ---      | ---      | ---           |     |
| Mn      | ug/g  | ---   | 41.4      | (1) | ---         | ---       | 41.4 (1) | ---      | ---           |     |
| Na      | ug/g  | 610   | ---       |     | ---         | ---       | ---      | ---      | ---           |     |
| Nb      | ug/g  | ---   | 39.9      | (1) | ---         | ---       | 39.9 (1) | ---      | ---           |     |
| Nd      | ug/g  | ---   | 98        | (1) | ---         | 98 (1)    | ---      | ---      | ---           |     |
| Ni      | ug/g  | ---   | 162       | (1) | ---         | ---       | 162 (1)  | ---      | ---           |     |
| P       | ug/g  | 480   | ---       |     | ---         | ---       | ---      | ---      | ---           |     |
| Pb      | ug/g  | ---   | 68        | (2) | 66.8 - 69.2 | ---       | 69.2 (1) | ---      | 66.8 (1)      | AA  |
| Rb      | ug/g  | ---   | 35        | (1) | ---         | 35 (1)    | ---      | ---      | ---           |     |
| S       | ug/g  | ---   | 1300      | (1) | ---         | ---       | ---      | ---      | 1300 (1)      | CB  |
| Sb      | ug/g  | ---   | 2.4       | (2) | 2.3 - 2.57  | 2.3 (1)   | ---      | ---      | 2.57 (1)      | AA  |
| Sc      | ug/g  | ---   | 32        | (2) | 28.8 - 34.8 | 34.8 (1)  | 28.8 (1) | ---      | ---           |     |
| Si      | %     | 22.85 | 22.2      | (1) | ---         | 22.2 (1)  | ---      | ---      | ---           |     |
| Sm      | ug/g  | ---   | 12        | (2) | 9.18 - 15   | 15 (1)    | 9.18 (1) | ---      | ---           |     |
| Sn      | ug/g  | ---   | 5.3 ± 0.4 | (3) | 4.88 - 5.76 | ---       | 4.88 (1) | ---      | 5.50 (2)      | AA  |
| Sr      | ug/g  | 330   | 438       | (1) | ---         | ---       | 438 (1)  | ---      | ---           |     |
| Ta      | ug/g  | ---   | 2.46      | (1) | ---         | 2.46 (1)  | ---      | ---      | ---           |     |
| Tb      | ug/g  | ---   | 2.92      | (1) | ---         | 2.92 (1)  | ---      | ---      | ---           |     |
| Th      | ug/g  | ---   | 23.9      | (1) | ---         | 23.9 (1)  | ---      | ---      | ---           |     |
| Ti      | %     | 0.964 | ---       |     | ---         | ---       | ---      | ---      | ---           |     |
| Tl      | ng/g  | ---   | 351       | (1) | ---         | ---       | ---      | ---      | 351 (1)       | ASV |
| V       | ug/g  | ---   | 554       | (1) | ---         | ---       | 554 (1)  | ---      | ---           |     |
| Y       | ug/g  | ---   | 176       | (1) | ---         | ---       | 176 (1)  | ---      | ---           |     |
| Yb      | ug/g  | ---   | 9.8       | (2) | 9.3 - 10.3  | 9.3 (1)   | 10.3 (1) | ---      | ---           |     |
| Zn      | ug/g  | ---   | < 23      |     | ---         | < 23      | ---      | ---      | ---           |     |
| Zr      | ug/g  | ---   | 740       | (1) | ---         | 740 (1)   | ---      | ---      | ---           |     |

TABLE 98A-2: INDIVIDUAL DATA FOR NBS SRM 98A (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>    |       |     |        |           | <u>Cs (ug/g)</u> |       |     |        |           |
| 17.42            | 2.5   |     | IENA   | 84CEL 01  | 6.2              | 0.06  |     | ITNA   | 77FLA 01  |
| <u>As (ug/g)</u> |       |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| 11.4             |       |     | HAA    | 84TER 04  | 121              |       |     | OES    | 77FLA 01  |
| <u>B (ug/g)</u>  |       |     |        |           | <u>Dy (ug/g)</u> |       |     |        |           |
| 120              |       |     | OES    | 77FLA 01  | 17.5             |       |     | OES    | 77FLA 01  |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Eu (ug/g)</u> |       |     |        |           |
| 168              |       |     | OES    | 77FLA 01  | 3.18             | 0.02  |     | ITNA   | 77FLA 01  |
| 480              | 20    |     | ITNA   | 77FLA 01  | 3.52             |       |     | OES    | 77FLA 01  |
| <u>Be (ug/g)</u> |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| 4.8              |       | D   | AA     | 83TER 01  | 8800             | 30    |     | ITNA   | 77FLA 01  |
| 4.8              |       |     | AA     | 82TER 02  |                  |       |     |        |           |
| 5.93             |       |     | OES    | 77FLA 01  | <u>Ga (ug/g)</u> |       |     |        |           |
| <u>Bi (ng/g)</u> |       |     |        |           | 23.3             |       |     | OES    | 77FLA 01  |
| 790              |       | D   | FAA    | 84TER 03  | <u>Hf (ug/g)</u> |       |     |        |           |
| 790              |       |     | HAA    | 84TER 02  | 7.3              | 0.14  |     | ITNA   | 77FLA 01  |
| <u>C (ug/g)</u>  |       |     |        |           | <u>Hg (ng/g)</u> |       |     |        |           |
| 8100             |       |     | CB     | 78TER 01  | 39.3             | 4.8   |     | FAA    | 82FLA 01  |
| <u>Cd (ng/g)</u> |       |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| 47               |       |     | AA     | 84TER 01  | 91.7             |       |     | OES    | 77FLA 01  |
| <u>Ce (ug/g)</u> |       |     |        |           | 162              | 2.99  |     | ITNA   | 77FLA 01  |
| 180              |       |     | OES    | 77FLA 01  | <u>Li (ug/g)</u> |       |     |        |           |
| 219              | 0.29  |     | ITNA   | 77FLA 01  | 291              |       |     | OES    | 77FLA 01  |
| <u>Co (ug/g)</u> |       |     |        |           | <u>Lu (ug/g)</u> |       |     |        |           |
| 11.5             | 0.06  |     | ITNA   | 77FLA 01  | 1.15             | 0.06  |     | ITNA   | 77FLA 01  |
| 14.4             |       |     | OES    | 77FLA 01  | <u>Mn (ug/g)</u> |       |     |        |           |
| <u>Cr (ug/g)</u> |       |     |        |           | 41.4             |       |     | OES    | 77FLA 01  |
| 212              | 4.8   |     | ITNA   | 77FLA 01  |                  |       |     |        |           |
| 234              |       |     | OES    | 77FLA 01  |                  |       |     |        |           |

TABLE 98A-2: INDIVIDUAL DATA FOR NBS SRM 98A

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Nb (ug/g)</u> |       |     |        |           | <u>Sr (ug/g)</u> |       |     |        |           |
| 39.9             |       |     | OES    | 77FLA 01  | 438              |       |     | OES    | 77FLA 01  |
| <u>Nd (ug/g)</u> |       |     |        |           | <u>Ta (ug/g)</u> |       |     |        |           |
| 98               | 2.6   |     | ITNA   | 77FLA 01  | 2.46             | 0.03  |     | ITNA   | 77FLA 01  |
| <u>Ni (ug/g)</u> |       |     |        |           | <u>Tb (ug/g)</u> |       |     |        |           |
| 162              |       |     | OES    | 77FLA 01  | 2.92             | 0.06  |     | ITNA   | 77FLA 01  |
| <u>Pb (ug/g)</u> |       |     |        |           | <u>Th (ug/g)</u> |       |     |        |           |
| 66.8             |       |     | AA     | 84TER 01  | 23.9             | 0.11  |     | ITNA   | 77FLA 01  |
| 69.2             |       |     | OES    | 77FLA 01  | <u>Tl (ng/g)</u> |       |     |        |           |
| <u>Rb (ug/g)</u> |       |     |        |           | 351              | 40    | 7   | ASV    | 82CAL 01  |
| 35               | 2.3   |     | ITNA   | 77FLA 01  | <u>V (ug/g)</u>  |       |     |        |           |
| <u>S (ug/g)</u>  |       |     |        |           | 554              |       |     | OES    | 77FLA 01  |
| 1300             |       |     | CB     | 78TER 01  | <u>Y (ug/g)</u>  |       |     |        |           |
| <u>Sb (ug/g)</u> |       |     |        |           | 176              |       |     | OES    | 77FLA 01  |
| 2.3              | 0.1   |     | ITNA   | 77FLA 01  | <u>Yb (ug/g)</u> |       |     |        |           |
| 2.57             |       |     | HAA    | 84TER 04  | 9.3              | 0.29  |     | ITNA   | 77FLA 01  |
| <u>Sc (ug/g)</u> |       |     |        |           | 10.3             |       |     | OES    | 77FLA 01  |
| 28.8             |       |     | OES    | 77FLA 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| 34.8             | 0.21  |     | ITNA   | 77FLA 01  | <                | 23    | L   | ITNA   | 77FLA 01  |
| <u>Si (%)</u>    |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
| 22.2             | 1.2   |     | IENA   | 84CEL 01  | 740              | 32    |     | ITNA   | 77FLA 01  |
| <u>Sm (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 9.18             |       |     | OES    | 77FLA 01  |                  |       |     |        |           |
| 15               | 2.4   |     | ITNA   | 77FLA 01  |                  |       |     |        |           |
| <u>Sn (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 4.88             |       |     | OES    | 77FLA 01  |                  |       |     |        |           |
| 5.25             |       |     | AA     | 82TER 01  |                  |       |     |        |           |
| 5.76             | 0.3   |     | FAA    | 85TER 01  |                  |       |     |        |           |

TABLE 99-1: COMPILED DATA FOR NBS SRM 99 SODA FELDSPAR (revised 3/1/86)

| ELE | UNITS | NBS   | CONSENSUS  |     | MEDIAN | RANGE         | NAA      | OES           | OTHER METHODS |        |
|-----|-------|-------|------------|-----|--------|---------------|----------|---------------|---------------|--------|
|     |       | Mean  | Mean ± SD  | (n) |        |               | Mean (n) | Mean ± SD (n) | Mean (n)      | Method |
| Al  | %     | 10.08 | 10.07      | (1) | ---    | ---           | ---      | ---           | 10.07 (1)     | TITR   |
| B   | ug/g  | ---   | 10         | (1) | ---    | ---           | ---      | 10 (1)        | ---           | ---    |
| Ba  | ug/g  | 90    | < 130      |     | ---    | ---           | < 130    | < 800         | ---           | ---    |
| Ca  | ug/g  | 2570  | ---        |     | ---    | ---           | ---      | ---           | ---           | ---    |
| Ce  | ug/g  | ---   | 8          | (1) | ---    | ---           | 8 (1)    | ---           | ---           | ---    |
| Co  | ng/g  | ---   | 740        | (2) | ---    | 700 - 780     | 740 (2)  | ---           | ---           | ---    |
| Cr  | ug/g  | ---   | 7.2 ± 5.1  | (3) | 8.51   | 3.3 - 13      | 4.3 (2)  | 13 (1)        | ---           | ---    |
| Cs  | ng/g  | ---   | 700        | (1) | ---    | ---           | 700 (1)  | ---           | ---           | ---    |
| Cu  | ug/g  | ---   | 21         | (2) | ---    | 20 - 22       | ---      | 21 (2)        | ---           | ---    |
| Eu  | ng/g  | ---   | 350        | (1) | ---    | ---           | 350 (1)  | ---           | ---           | ---    |
| Fe  | ug/g  | 470   | 500        | (1) | ---    | ---           | 500 (1)  | ---           | ---           | ---    |
| Ga  | ug/g  | ---   | 30         | (1) | ---    | ---           | ---      | 30 (1)        | ---           | ---    |
| Hf  | ng/g  | ---   | 900        | (1) | ---    | ---           | 900 (1)  | ---           | ---           | ---    |
| K   | ug/g  | 3400  | ---        |     | ---    | ---           | ---      | ---           | ---           | ---    |
| LOI | %     | 0.52  | ---        |     | ---    | ---           | ---      | ---           | ---           | ---    |
| La  | ug/g  | ---   | < 8        |     | ---    | ---           | < 8      | < 100         | ---           | ---    |
| Lu  | ng/g  | ---   | < 200      |     | ---    | ---           | < 200    | ---           | ---           | ---    |
| Mg  | ug/g  | 320   | ---        |     | ---    | ---           | ---      | ---           | ---           | ---    |
| Mn  | ug/g  | < 70  | 31         | (2) | ---    | 12 - 50       | ---      | 31 (2)        | ---           | ---    |
| Na  | %     | 7.96  | 7.94       | (1) | ---    | ---           | ---      | ---           | 7.94 (1)      | XRF    |
| Nd  | ug/g  | ---   | < 4        |     | ---    | ---           | < 4      | ---           | ---           | ---    |
| Ni  | ug/g  | ---   | 15         | (1) | ---    | ---           | ---      | 15 (1)        | ---           | ---    |
| P   | ug/g  | 620   | 567        | (1) | ---    | ---           | ---      | 567 (1)       | ---           | ---    |
| Pb  | ug/g  | ---   | 106        | (2) | ---    | 62 - 150      | ---      | 106 (2)       | ---           | ---    |
| Rb  | ug/g  | ---   | 23         | (1) | ---    | ---           | 23 (1)   | ---           | ---           | ---    |
| Sb  | ng/g  | ---   | 500        | (1) | ---    | ---           | 500 (1)  | ---           | ---           | ---    |
| Sc  | ng/g  | ---   | 830        | (1) | ---    | ---           | 830 (1)  | ---           | ---           | ---    |
| Si  | %     | 32.06 | 32.05      | (2) | ---    | 32.05 - 32.05 | ---      | ---           | 32.05 (1)     | TITR   |
| Si  | %     | ---   | ---        |     | ---    | ---           | ---      | ---           | 32.05 (1)     | COLOR  |
| Sm  | ug/g  | ---   | < 2        |     | ---    | ---           | < 2      | ---           | ---           | ---    |
| Sr  | ug/g  | ---   | 220 ± 160  | (3) | 130    | 120 - 400     | 120 (1)  | 265 (2)       | ---           | ---    |
| Ta  | ug/g  | ---   | 1.9        | (1) | ---    | ---           | 1.9 (1)  | ---           | ---           | ---    |
| Tb  | ng/g  | ---   | 280        | (1) | ---    | ---           | 280 (1)  | ---           | ---           | ---    |
| Th  | ug/g  | ---   | 1.6        | (1) | ---    | ---           | 1.6 (1)  | ---           | ---           | ---    |
| Ti  | ug/g  | 100   | 240 ± 220  | (4) | 68     | 61 - 560      | ---      | 140 ± 70 (3)  | 560 (1)       | COLOR  |
| U   | ug/g  | ---   | 1.09       | (1) | ---    | ---           | 1.09 (1) | ---           | ---           | ---    |
| V   | ug/g  | ---   | < 10       |     | ---    | ---           | ---      | < 10          | ---           | ---    |
| Y   | ug/g  | ---   | 10         | (1) | ---    | ---           | ---      | 10 (1)        | ---           | ---    |
| Yb  | ug/g  | ---   | 1          | (1) | ---    | ---           | 1 (1)    | ---           | ---           | ---    |
| Zn  | ug/g  | ---   | 15.9 ± 1.8 | (3) | 15     | 14.6 - 18     | 16.3 (2) | ---           | ---           | ---    |
| Zr  | ug/g  | ---   | 26         | (2) | ---    | 11 - 40       | ---      | ---           | ---           | ---    |

TABLE 99-2: INDIVIDUAL DATA FOR NBS SRM 99 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>    |       |     |        |           | <u>Hf (ng/g)</u> |       |     |        |           |
| 10.07            |       |     | TITR   | 58WAT 01  | 900              | 60    |     | ITNA   | 77FLA 01  |
| <u>B (ug/g)</u>  |       |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| 10               |       |     | OES    | 63CLA 01  | <                | 8     | L   | ITNA   | 77FLA 01  |
|                  |       |     |        |           | <                | 100   | L   | OES    | 63CLA 01  |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Lu (ng/g)</u> |       |     |        |           |
| <                | 130   | L   | ITNA   | 77FLA 01  |                  |       |     |        |           |
| <                | 800   | L   | OES    | 63CLA 01  | <                | 200   | L   | ITNA   | 77FLA 01  |
| <u>Ce (ug/g)</u> |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 8                | 0.6   |     | ITNA   | 77FLA 01  | 12               |       |     | OES    | 64FIL 01  |
|                  |       |     |        |           | 50               |       |     | OES    | 63CLA 01  |
| <u>Co (ng/g)</u> |       |     |        |           | <u>Na (%)</u>    |       |     |        |           |
| <                | 10000 | L   | OES    | 63CLA 01  | 7.94             |       |     | WXRF   | 83BAL 01  |
| 700              | 30    |     | ITNA   | 77FLA 01  |                  |       |     |        |           |
| 780              | 120   |     | RTNA   | 61TUR 01  |                  |       |     |        |           |
| <u>Cr (ug/g)</u> |       |     |        |           | <u>Nd (ug/g)</u> |       |     |        |           |
| <                | 20    | L   | OES    | 63CLA 01  | <                | 4     | L   | ITNA   | 77FLA 01  |
| 3.3              | 0.16  |     | ITNA   | 77FLA 01  |                  |       |     |        |           |
| 5.3              |       |     | RTNA   | 61TUR 01  |                  |       |     |        |           |
| 13               |       |     | OES    | 64FIL 01  |                  |       |     |        |           |
| <u>Cs (ng/g)</u> |       |     |        |           | <u>P (ug/g)</u>  |       |     |        |           |
| 700              | 100   |     | ITNA   | 77FLA 01  | 567              |       |     | OES    | 64FIL 01  |
| <u>Cu (ug/g)</u> |       |     |        |           | <u>Pb (ug/g)</u> |       |     |        |           |
| 20               |       |     | OES    | 63CLA 01  | 62               |       |     | OES    | 64FIL 01  |
| 22               |       |     | OES    | 64FIL 01  | 150              |       |     | OES    | 63CLA 01  |
| <u>Eu (ng/g)</u> |       |     |        |           | <u>Rb (ug/g)</u> |       |     |        |           |
| 350              |       |     | ITNA   | 77FLA 01  | 23               | 1.6   |     | ITNA   | 77FLA 01  |
| <u>Fe (ug/g)</u> |       |     |        |           | <u>Sb (ng/g)</u> |       |     |        |           |
| 500              |       |     | ITNA   | 77FLA 01  | 500              | 60    |     | ITNA   | 77FLA 01  |
| <u>Ga (ug/g)</u> |       |     |        |           | <u>Sc (ng/g)</u> |       |     |        |           |
| 30               |       |     | OES    | 63CLA 01  | <                | 10000 | L   | OES    | 63CLA 01  |
|                  |       |     |        |           | 830              | 10    |     | ITNA   | 77FLA 01  |

TABLE 99-2: INDIVIDUAL DATA FOR NBS SRM 99 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Si (%)</u>    |       |     |        |           | <u>U (ug/g)</u>  |       |     |        |           |
| 32.05            |       |     | COLOR  | 82SAR 01  | 1.09             |       |     | DNA    | 66HAM 01  |
| 32.05            | 0.01  |     | TITR   | 77OHL 01  |                  |       |     |        |           |
| <u>Sm (ug/g)</u> |       |     |        |           | <u>V (ug/g)</u>  |       |     |        |           |
| <                | 2     | L   | ITNA   | 77FLA 01  | <                | 10    | L   | OES    | 63CLA 01  |
| <u>Sr (ug/g)</u> |       |     |        |           | <u>Y (ug/g)</u>  |       |     |        |           |
| 120              |       |     | RTNA   | 61TUR 01  | 10               |       |     | OES    | 63CLA 01  |
| 130              |       |     | OES    | 75THO 01  |                  |       |     |        |           |
| 400              |       |     | OES    | 63CLA 01  |                  |       |     |        |           |
| <u>Ta (ug/g)</u> |       |     |        |           | <u>Yb (ug/g)</u> |       |     |        |           |
| 1.9              | 0.02  |     | ITNA   | 77FLA 01  | 1                | 0.06  |     | ITNA   | 77FLA 01  |
| <u>Tb (ng/g)</u> |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 280              | 6     |     | ITNA   | 77FLA 01  | 14.6             |       |     | RTNA   | 65BAL 01  |
|                  |       |     |        |           | 15               |       |     | XRF    | 65BAL 01  |
|                  |       |     |        |           | 18               | 0.82  |     | ITNA   | 77FLA 01  |
| <u>Th (ug/g)</u> |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
| 1.6              | 0.03  |     | ITNA   | 77FLA 01  | <                | 100   | L   | ITNA   | 77FLA 01  |
|                  |       |     |        |           | 11               |       |     | OES    | 64FIL 01  |
|                  |       |     |        |           | 40               |       |     | OES    | 63CLA 01  |
| <u>Ti (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 61               |       |     | OES    | 64FIL 01  |                  |       |     |        |           |
| 150              |       | 3   | OES    | 63CLA 01  |                  |       |     |        |           |
| 200              |       | 3   | OES    | 63CLA 01  |                  |       |     |        |           |
| 560              |       |     | COLOR  | 63KOR 01  |                  |       |     |        |           |

TABLE 99A-1: COMPILED DATA FOR NBS SRM 99A SODA FELDSPAR (revised 3/1/86)

| ELE | UNITS | NBS  | CONSENSUS   |     | MEDIAN | RANGE      | AA       | NAA      | OTHER METHODS |              |
|-----|-------|------|-------------|-----|--------|------------|----------|----------|---------------|--------------|
|     |       | Mean | Mean ± SD   | (n) |        |            | Mean (n) | Mean (n) | Mean (n)      | Method       |
| Al  | %     | 10.8 | ---         | --- | ---    | ---        | ---      | ---      | ---           | ---          |
| Ba  | ug/g  | 2330 | 2570        | (1) | ---    | ---        | ---      | 2570     | (1)           | ---          |
| Be  | ug/g  | ---  | 2.02        | (1) | ---    | ---        | 2.02     | (1)      | ---           | ---          |
| Bi  | ng/g  | ---  | 3           | (1) | ---    | ---        | 3        | (1)      | ---           | ---          |
| C   | ug/g  | ---  | 300         | (1) | ---    | ---        | ---      | ---      | 300           | (1) CB       |
| Ca  | %     | 1.53 | 1.51        | (1) | ---    | ---        | 1.51     | (1)      | ---           | ---          |
| Cd  | ng/g  | ---  | < 200       |     | ---    | ---        | ---      | ---      | ---           | ---          |
| Ce  | ug/g  | ---  | 5           | (1) | ---    | ---        | ---      | 5        | (1)           | ---          |
| Co  | ng/g  | ---  | 100         | (1) | ---    | ---        | ---      | 100      | (1)           | ---          |
| Cr  | ug/g  | ---  | < 3         |     | ---    | ---        | ---      | < 3      |               | ---          |
| Cs  | ug/g  | ---  | 5 ?         | (2) | ---    | 0.5 - 9    | 9        | (1)      | 0.5           | (1) ---      |
| Eu  | ng/g  | ---  | 820         | (1) | ---    | ---        | ---      | 820      | (1)           | ---          |
| Fe  | ug/g  | 450  | 475         | (2) | ---    | 450 - 500  | 450      | (1)      | 500           | (1) ---      |
| Hf  | ng/g  | ---  | 300         | (1) | ---    | ---        | ---      | 300      | (1)           | ---          |
| Hg  | ng/g  | ---  | 165         | (1) | ---    | ---        | 165      | (1)      | ---           | ---          |
| K   | %     | 4.3  | 4.27 ± 0.12 | (3) | 4.2    | 4.2 - 4.4  | 4.4      | (1)      | ---           | 4.2 (1) FE   |
| K   | %     | ---  | ---         |     | ---    | ---        | ---      | ---      | ---           | 4.2 (1) ISE  |
| LOI | %     | 0.26 | ---         |     | ---    | ---        | ---      | ---      | ---           | ---          |
| La  | ug/g  | ---  | 22          | (1) | ---    | ---        | ---      | 22       | (1)           | ---          |
| Lu  | ng/g  | ---  | < 100       |     | ---    | ---        | ---      | < 100    |               | ---          |
| Mg  | ug/g  | 120  | 130         | (1) | ---    | ---        | 130      | (1)      | ---           | ---          |
| Na  | %     | 4.6  | 4.55 ± 0.09 | (3) | 4.6    | 4.45 - 4.6 | 4.45     | (1)      | ---           | 4.6 (1) ISE  |
| Na  | %     | ---  | ---         |     | ---    | ---        | ---      | ---      | ---           | 4.6 (1) FE   |
| Nd  | ug/g  | ---  | < 4         |     | ---    | ---        | ---      | < 4      |               | ---          |
| P   | ug/g  | 87   | 55          | (2) | ---    | 50 - 60    | ---      | ---      | ---           | 60 (1) COLOR |
| Rb  | ug/g  | ---  | 104         | (2) | ---    | 100 - 109  | 100      | (1)      | 109           | (1) ---      |
| S   | ug/g  | ---  | 19          | (1) | ---    | ---        | ---      | ---      | ---           | ---          |
| Sb  | ng/g  | ---  | < 300       |     | ---    | ---        | ---      | < 300    |               | ---          |
| Sc  | ng/g  | ---  | 230         | (1) | ---    | ---        | ---      | 230      | (1)           | ---          |
| Si  | %     | 30.4 | 30.42       | (1) | ---    | ---        | 30.42    | (1)      | ---           | ---          |
| Sm  | ng/g  | ---  | 500         | (1) | ---    | ---        | ---      | 500      | (1)           | ---          |
| Sn  | ug/g  | ---  | 0.45        | (1) | ---    | ---        | ---      | ---      | ---           | ---          |
| Ta  | ng/g  | ---  | < 200       |     | ---    | ---        | ---      | < 200    |               | ---          |
| Tb  | ng/g  | ---  | < 200       |     | ---    | ---        | ---      | < 200    |               | ---          |
| Th  | ng/g  | ---  | 500         | (1) | ---    | ---        | ---      | 500      | (1)           | ---          |
| Ti  | ug/g  | 42   | ---         |     | ---    | ---        | ---      | ---      | ---           | ---          |
| Yb  | ng/g  | ---  | < 300       |     | ---    | ---        | ---      | < 300    |               | ---          |
| Zn  | ug/g  | ---  | < 7         |     | ---    | ---        | ---      | < 7      |               | ---          |
| Zr  | ug/g  | ---  | 70          | (1) | ---    | ---        | ---      | 70       | (1)           | ---          |

TABLE 99A-2: INDIVIDUAL DATA FOR NBS SRM 99A (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer  | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|--------|-----|--------|-----------|
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Hf (ng/g)</u> |        |     |        |           |
| 2570             | 38.6  |     | ITNA   | 77FLA 01  | 300              | 30     |     | ITNA   | 77FLA 01  |
| <u>Be (ng/g)</u> |       |     |        |           | <u>Hg (ng/g)</u> |        |     |        |           |
| 2020             |       |     | AA     | 83TER 01  | 164.6            | 7.35   |     | FAA    | 82FLA 01  |
| <u>Bi (ng/g)</u> |       |     |        |           | <u>K (%)</u>     |        |     |        |           |
| 3                |       |     | FAA    | 84TER 03  | 4.2              |        |     | FE     | 75PUF 01  |
| <u>C (ug/g)</u>  |       |     |        |           | 4.2              | 0.13   |     | ISE    | 75PUF 01  |
| 300              |       |     | CB     | 78TER 01  | 4.4              |        |     | AA     | 73RAM 01  |
| <u>Ca (%)</u>    |       |     |        |           | <u>La (ug/g)</u> |        |     |        |           |
| 1.51             |       |     | AA     | 73RAM 01  | 22               | 1.9    |     | ITNA   | 77FLA 01  |
| <u>Cd (ng/g)</u> |       |     |        |           | <u>Lu (ng/g)</u> |        |     |        |           |
| <                | 200   |     | ICPES  | 83UCH 02  | <                | 100    | L   | ITNA   | 77FLA 01  |
| <u>Ce (ug/g)</u> |       |     |        |           | <u>Mg (ug/g)</u> |        |     |        |           |
| 5                | 0.29  |     | ITNA   | 77FLA 01  | 130              |        |     | AA     | 73RAM 01  |
| <u>Co (ng/g)</u> |       |     |        |           | <u>Na (%)</u>    |        |     |        |           |
| 100              |       |     | ITNA   | 77FLA 01  | 4.45             |        |     | AA     | 73RAM 01  |
| <u>Cr (ug/g)</u> |       |     |        |           | 4.6              |        |     | FE     | 75PUF 01  |
| <                | 3     | L   | ITNA   | 77FLA 01  | 4.6              | 0.1    |     | ISE    | 75PUF 01  |
| <u>Cs (ug/g)</u> |       |     |        |           | <u>Nd (ug/g)</u> |        |     |        |           |
| 0.5              | 0.03  |     | ITNA   | 77FLA 01  | <                | 4      | L   | ITNA   | 77FLA 01  |
| 9                |       |     | AA     | 72ALL 01  | <u>P (%)</u>     |        |     |        |           |
| <u>Eu (ng/g)</u> |       |     |        |           | 0.005            | 0.0001 |     | ICPES  | 83UCH 01  |
| 820              | 4     |     | ITNA   | 77FLA 01  | 0.006            | 0.0002 |     | COLOR  | 83UCH 01  |
| <u>Fe (ug/g)</u> |       |     |        |           | <u>Rb (ug/g)</u> |        |     |        |           |
| 450              |       |     | AA     | 73RAM 01  | 100              |        |     | AA     | 72ALL 01  |
| 500              |       |     | ITNA   | 77FLA 01  | 109              | 1.2    |     | ITNA   | 77FLA 01  |
|                  |       |     |        |           | <u>S (ug/g)</u>  |        |     |        |           |
|                  |       |     |        |           | 19               |        |     | CB     | 78TER 01  |

TABLE 99A-2: INDIVIDUAL DATA FOR NBS SRM 99A

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> | <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|------------------|--------------|------------|---------------|------------------|
| <u>Sb (ng/g)</u> |              |            |               |                  | <u>Ta (ng/g)</u> |              |            |               |                  |
| <                | 300          | L          | ITNA          | 77FLA 01         | <                | 200          | L          | ITNA          | 77FLA 01         |
| <u>Sc (ng/g)</u> |              |            |               |                  | <u>Tb (ng/g)</u> |              |            |               |                  |
| 230              |              |            | ITNA          | 77FLA 01         | <                | 200          | L          | ITNA          | 77FLA 01         |
| <u>Si (%)</u>    |              |            |               |                  | <u>Th (ng/g)</u> |              |            |               |                  |
| 30.42            | 0.4          |            | AA            | 82KIS 01         | 500              |              |            | ITNA          | 77FLA 01         |
| <u>Sm (ng/g)</u> |              |            |               |                  | <u>Yb (ng/g)</u> |              |            |               |                  |
| 500              | 70           |            | ITNA          | 77FLA 01         | <                | 300          | L          | ITNA          | 77FLA 01         |
| <u>Sn (ug/g)</u> |              |            |               |                  | <u>Zn (ug/g)</u> |              |            |               |                  |
| 0.45             |              |            | AA            | 82TER 01         | <                | 7            | L          | ITNA          | 77FLA 01         |
|                  |              |            |               |                  | <u>Zr (ug/g)</u> |              |            |               |                  |
|                  |              |            |               |                  | 70               |              |            | ITNA          | 77FLA 01         |

TABLE 120A-1: COMPILED DATA ON NBS SRM 120A PHOSPHATE ROCK (revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS   |     | MEDIAN | RANGE        | ICPES |     | OTHER METHODS |            |
|---------|-------|-------------|-------------|-----|--------|--------------|-------|-----|---------------|------------|
|         |       |             | Mean ± SD   | (n) |        |              | Mean  | (n) | Mean ± SD     | (n) Method |
| Al      | ug/g  | 5000        | 4500        | (1) | ---    | ---          | 4500  | (1) | ---           |            |
| Be      | ug/g  | ---         | 1.88        | (1) | ---    | ---          | ---   |     | 1.88          | (1) AA     |
| C       | %     | ---         | 1.04        | (1) | ---    | ---          | ---   |     | 1.04          | (1) CB     |
| C-inorg | ug/g  | 8700        | ---         |     | ---    | ---          | ---   |     | ---           |            |
| Ca      | %     | 36          | 36.06       | (2) | ---    | 36.02 - 36.1 | 36.1  | (1) | 36.02         | (1) TITR   |
| Cd      | ug/g  | ---         | 11.8        | (1) | ---    | ---          | ---   |     | 11.8          | (1) AA     |
| F       | %     | 3.92        | 3.90 ± 0.10 | (7) | 3.88   | 3.8 - 4.04   | ---   |     | 3.88 ± 0.09   | (5) ISE    |
| F       | %     | ---         | ---         |     | ---    | ---          | ---   |     | 4.04          | (1) CPAA   |
| F       | %     | ---         | ---         |     | ---    | ---          | ---   |     | 3.82          | (1) COLOR  |
| Fe      | ug/g  | 6990        | 7340        | (1) | ---    | ---          | 7340  | (1) | ---           |            |
| Hg      | ng/g  | ---         | 57.5        | (1) | ---    | ---          | ---   |     | 57.5          | (1) AA     |
| K       | ug/g  | 830         | ---         |     | ---    | ---          | ---   |     | ---           |            |
| Mg      | ug/g  | 1600        | 1400        | (1) | ---    | ---          | 1400  | (1) | ---           |            |
| Mn      | ug/g  | 150         | 160         | (1) | ---    | ---          | 160   | (1) | ---           |            |
| Na      | ug/g  | 3000        | ---         |     | ---    | ---          | ---   |     | ---           |            |
| P       | %     | 15          | ---         |     | ---    | ---          | ---   |     | ---           |            |
| Pb      | ug/g  | ---         | 9.3         | (1) | ---    | ---          | ---   |     | 9.3           | (1) AA     |
| S       | ug/g  | ---         | 2900        | (1) | ---    | ---          | ---   |     | 2900          | (1) CB     |
| Ti      | ug/g  | 720         | 720         | (1) | ---    | ---          | 720   | (1) | ---           |            |
| U       | ug/g  | ---         | 110         | (1) | ---    | ---          | ---   |     | 110           | (1) COLOR  |

TABLE 120A-2: INDIVIDUAL DATA FOR NBS SRM 120A (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (ug/g)</u> |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| 4500             |       |     | ICPES  | 80BRE 01  | 7340             |       |     | ICPES  | 80BRE 01  |
| <u>Be (ug/g)</u> |       |     |        |           | <u>Hg (ng/g)</u> |       |     |        |           |
| 1.88             |       |     | AA     | 83TER 01  | 57.5             | 3.6   |     | FAA    | 82FLA 01  |
| <u>C (%)</u>     |       |     |        |           | <u>Mg (ug/g)</u> |       |     |        |           |
| 1.04             |       |     | CB     | 78TER 01  | 1400             |       |     | ICPES  | 80BRE 01  |
| <u>Ca (%)</u>    |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 36.02            |       |     | TITR   | 80HIT 02  | 160              |       |     | ICPES  | 80BRE 01  |
| 36.1             |       |     | ICPES  | 80BRE 01  |                  |       |     |        |           |
| <u>Cd (ug/g)</u> |       |     |        |           | <u>Pb (ug/g)</u> |       |     |        |           |
| 11.8             |       |     | AA     | 84TER 01  | 9.3              |       |     | AA     | 84TER 01  |
| <u>F (%)</u>     |       |     |        |           | <u>S (ug/g)</u>  |       |     |        |           |
| 3.8              |       | 11  | ISE    | 69EDM 01  | 2900             |       |     | CB     | 78TER 01  |
| 3.8              | 0.1   |     | ISE    | 77HOP 01  |                  |       |     |        |           |
| 3.82             | 0.05  |     | COLOR  | 83CHA 02  |                  |       |     |        |           |
| 3.88             |       | 11  | ISE    | 69EDM 01  | <u>Ti (ug/g)</u> |       |     |        |           |
| 3.93             |       | 11  | ISE    | 71PET 01  | 720              |       |     | ICPES  | 80BRE 01  |
| 4.01             |       | 11  | ISE    | 71PET 01  |                  |       |     |        |           |
| 4.04             |       |     | CPAA   | 85ROE 01  | <u>U (ug/g)</u>  |       |     |        |           |
|                  |       |     |        |           | 110              | 10    |     | COLOR  | 810GU 01  |

TABLE 1208-1: COMPILED DATA FOR NBS SRM 120B PHOSPHATE ROCK (revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS   |      | MEDIAN | RANGE        | AA    |     | NAA  |     | ICPES      |     | OTHER METHODS |               |
|---------|-------|-------------|-------------|------|--------|--------------|-------|-----|------|-----|------------|-----|---------------|---------------|
|         |       |             | Mean ± SD   | (n)  |        |              | Mean  | (n) | Mean | (n) | Mean ± SD  | (n) | Mean          | (n)           |
| Ag      | ug/g  | ---         | 5           | (1)  | ---    | ---          | ---   | --- | ---  | --- | 5          | (1) | ---           | ---           |
| Al      | ug/g  | 5600        | 5790 ± 350  | (8)  | 5980   | 5100 - 6000  | 5100  | (1) | ---  | --- | 5880 ± 240 | (6) | 6000          | (1) TCGS      |
| As      | ug/g  | ---         | 5.52        | (1)  | ---    | ---          | 5.52  | (1) | ---  | --- | ---        | --- | ---           | ---           |
| Au      | ug/g  | ---         | < 3         | ---  | ---    | ---          | ---   | --- | ---  | --- | < 3        | --- | ---           | ---           |
| Ba      | ug/g  | ---         | 61          | (1)  | ---    | ---          | ---   | --- | ---  | --- | 61         | (1) | ---           | ---           |
| Be      | ug/g  | ---         | 2.86        | (2)  | ---    | 2.82 - 2.9   | 2.82  | (1) | ---  | --- | 2.9        | (1) | ---           | ---           |
| Bi      | ng/g  | ---         | 197         | (1)  | ---    | ---          | 197   | (1) | ---  | --- | ---        | --- | ---           | ---           |
| C       | %     | ---         | 1.39        | (2)  | ---    | 0.983 - 1.8  | ---   | --- | ---  | --- | ---        | --- | 1.8           | (1) SIMS      |
| C       | %     | ---         | ---         | ---  | ---    | ---          | ---   | --- | ---  | --- | ---        | --- | 0.983         | (1) CB        |
| C-inorg | ug/g  | 7600        | ---         | ---  | ---    | ---          | ---   | --- | ---  | --- | ---        | --- | ---           | ---           |
| Ca      | %     | 35.32       | 34.4 ± 1.1  | (9)  | 35.06  | 32.7 - 35.41 | 33.98 | (1) | ---  | --- | 35.0 ± 0.6 | (6) | 32.7          | (1) TCGS      |
| Cd      | ug/g  | 18          | 22 ± 3      | (3)  | 22     | 20.1 - 25.3  | 22.7  | (2) | ---  | --- | 22         | (1) | ---           | ---           |
| Ce      | ug/g  | ---         | 115 ± 14    | (3)  | 118    | 100 - 128    | ---   | --- | 100  | (1) | 123        | (2) | ---           | ---           |
| Co      | ug/g  | ---         | 2.85        | (2)  | ---    | 2.7 - 3      | ---   | --- | 2.7  | (1) | .3         | (1) | ---           | ---           |
| Cr      | ug/g  | ---         | 59.6        | (2)  | ---    | 56 - 63.1    | ---   | --- | 56   | (1) | 63.1       | (1) | ---           | ---           |
| Cu      | ug/g  | ---         | 9.95        | (2)  | ---    | 8.6 - 11.3   | 11.3  | (1) | ---  | --- | 8.6        | (1) | ---           | ---           |
| Dy      | ug/g  | ---         | 17.2        | (2)  | ---    | 17 - 17.3    | ---   | --- | ---  | --- | 17.15      | (2) | ---           | ---           |
| Er      | ug/g  | ---         | 11.7        | (2)  | ---    | 11.4 - 12    | ---   | --- | ---  | --- | 11.7       | (2) | ---           | ---           |
| Eu      | ug/g  | ---         | 3.6 ± 0.2   | (3)  | 3.5    | 3.5 - 3.89   | ---   | --- | 3.5  | (1) | 3.7        | (2) | ---           | ---           |
| F       | %     | 3.84        | 3.89 ± 0.10 | (5)  | 3.89   | 3.78 - 4.04  | ---   | --- | 3.8  | (2) | ---        | --- | ---           | 3.93 (1) CPAA |
| F       | %     | ---         | ---         | ---  | ---    | ---          | ---   | --- | ---  | --- | ---        | --- | ---           | 4.04 (1) ISE  |
| F       | %     | ---         | ---         | ---  | ---    | ---          | ---   | --- | ---  | --- | ---        | --- | ---           | 3.89 (1) IC   |
| Fe      | ug/g  | 7700        | 7350 ± 480  | (12) | 7400   | 6570 - 7970  | 7214  | (2) | 7135 | (2) | 7350 ± 350 | (6) | 7400          | (1) TCGS      |
| Gd      | ug/g  | ---         | 18.9 ± 1.8  | (3)  | 18     | 17.8 - 21    | ---   | --- | ---  | --- | 18.9 ± 1.8 | (3) | ---           | ---           |
| Hf      | ug/g  | ---         | 2           | (1)  | ---    | ---          | ---   | --- | 2    | (1) | ---        | --- | ---           | ---           |
| Ho      | ug/g  | ---         | 3.92        | (2)  | ---    | 3.8 - 4.03   | ---   | --- | ---  | --- | 3.92       | (2) | ---           | ---           |
| K       | ug/g  | 1000        | 705 ± 91    | (4)  | 660    | 600 - 800    | 800   | (1) | ---  | --- | 600        | (1) | 760           | (1) SIMS      |
| La      | ug/g  | ---         | 88 ± 6      | (4)  | 89     | 79 - 92.8    | ---   | --- | 79   | (1) | 91 ± 2     | (3) | ---           | ---           |
| Li      | ug/g  | ---         | < 2         | ---  | ---    | ---          | ---   | --- | ---  | --- | < 2        | --- | ---           | ---           |
| Lu      | ug/g  | ---         | 1.70 ± 0.10 | (3)  | 1.71   | 1.6 - 1.8    | ---   | --- | 1.8  | (1) | 1.66       | (2) | ---           | ---           |

TABLE 120B-1: COMPILED DATA FOR NBS SRM 120B PHOSPHATE ROCK (cont.)

| ELEMENT | UNITS | NBS Mean        | CONSENSUS Mean $\pm$ SD (n) | MEDIAN | RANGE        | AA       |            | NAA               |          | ICPES                |                 | OTHER METHODS  |  |
|---------|-------|-----------------|-----------------------------|--------|--------------|----------|------------|-------------------|----------|----------------------|-----------------|----------------|--|
|         |       |                 |                             |        |              | Mean (n) | Mean (n)   | Mean $\pm$ SD (n) | Mean (n) | Mean (n)             | Mean (n) Method |                |  |
| Mg      | ug/g  | 1700            | 1695 $\pm$ 90 (7)           | 1700   | 1600 - 1870  | 1600 (1) | ---        | ---               | ---      | 1710 $\pm$ 90 (6)    | ---             | ---            |  |
| Mn      | ug/g  | 250             | 244 $\pm$ 12 (4)            | 240    | 230 - 260    | 243 (2)  | ---        | ---               | ---      | 245 (2)              | ---             | ---            |  |
| Mo      | ug/g  | ---             | < 5                         | ---    | ---          | ---      | ---        | ---               | ---      | < 5                  | ---             | ---            |  |
| Na      | ug/g  | 2600            | 2660 $\pm$ 260 (4)          | 2630   | 2300 - 2900  | 2300 (1) | ---        | ---               | ---      | 2630 (1)             | 2800 (1) TCGS   | ---            |  |
| Na      | ug/g  | ---             | ---                         | ---    | ---          | ---      | ---        | ---               | ---      | ---                  | 2900 (1) SIMS   | ---            |  |
| Nd      | ug/g  | ---             | 75 $\pm$ 6 (3)              | 77     | 68 - 79.5    | ---      | 68 (1)     | ---               | ---      | 78.25 (2)            | ---             | ---            |  |
| Ni      | ug/g  | ---             | 17 $\pm$ 6 (3)              | 15.4   | 12 - 22.9    | 22.9 (1) | 12 (1)     | ---               | ---      | 15.4 (1)             | ---             | ---            |  |
| O       | %     | ---             | 36                          | ---    | ---          | ---      | ---        | ---               | ---      | ---                  | 36 (1) 14NAA    | ---            |  |
| P       | %     | 15.07           | 15.06 $\pm$ 0.18 (7)        | 15.12  | 14.7 - 15.21 | ---      | ---        | ---               | ---      | 15.12 $\pm$ 0.10 (6) | 14.7 (1) TCGS   | ---            |  |
| Pb      | ug/g  | ---             | 24 $\pm$ 10 (3)             | 25     | 13.1 - 32.7  | 22.9 (2) | ---        | ---               | ---      | 25 (1)               | ---             | ---            |  |
| Pr      | ug/g  | ---             | 17.4 (2)                    | ---    | 17 - 17.9    | ---      | ---        | ---               | ---      | 17.45 (2)            | ---             | ---            |  |
| Ra-226  | pCi/g | ---             | 43.3 (1)                    | ---    | ---          | ---      | ---        | ---               | ---      | ---                  | ---             | ---            |  |
| S       | ug/g  | ---             | 2200 (1)                    | ---    | ---          | ---      | ---        | ---               | ---      | ---                  | ---             | 43.3 (1) GAMMA |  |
| Sb      | ug/g  | ---             | 5.81 (2)                    | ---    | 1.62 - 10    | 1.62 (1) | ---        | ---               | ---      | 10 (1)               | ---             | ---            |  |
| Sc      | ug/g  | ---             | 6.4 (1)                     | ---    | ---          | ---      | 6.4 (1)    | ---               | ---      | ---                  | ---             | ---            |  |
| Se      | ug/g  | ---             | < 30                        | ---    | ---          | ---      | ---        | ---               | ---      | < 30                 | ---             | ---            |  |
| Si      | %     | 2.18            | 2.22 $\pm$ 0.12 (10)        | 2.21   | 2.01 - 2.41  | 2.31 (2) | 2.12 (1)   | ---               | ---      | 2.24 $\pm$ 0.08 (5)  | 2.19 (1) TCGS   | ---            |  |
| Sm      | ug/g  | ---             | 23 $\pm$ 13 (3)             | 16     | 15.8 - 38    | ---      | ---        | ---               | ---      | 23 $\pm$ 13 (3)      | ---             | ---            |  |
| Sn      | ug/g  | ---             | 0.41 (1)                    | ---    | ---          | 0.41 (1) | ---        | ---               | ---      | ---                  | ---             | ---            |  |
| Sr      | ug/g  | ---             | 705 (1)                     | ---    | ---          | ---      | ---        | ---               | ---      | 705 (1)              | ---             | ---            |  |
| Ta      | ng/g  | ---             | 200 (1)                     | ---    | ---          | ---      | 200 (1)    | ---               | ---      | ---                  | ---             | ---            |  |
| Tb      | ug/g  | ---             | 2 (1)                       | ---    | ---          | ---      | 2 (1)      | ---               | ---      | ---                  | ---             | ---            |  |
| Th      | ug/g  | ---             | 8.0 $\pm$ 0.9 (3)           | 7.9    | 7.2 - 9.05   | ---      | 7.2 (1)    | ---               | ---      | ---                  | 8.475 (2) AS    | ---            |  |
| Ti      | ug/g  | 900             | 870 $\pm$ 100 (5)           | 950    | 740 - 950    | ---      | 780 (1)    | ---               | ---      | 880 $\pm$ 120 (3)    | 950 (1) TCGS    | ---            |  |
| Tm      | ug/g  | ---             | 1.1 (1)                     | ---    | ---          | ---      | 1.1 (1)    | ---               | ---      | ---                  | ---             | ---            |  |
| U       | ug/g  | 128.4 $\pm$ 0.5 | 132 $\pm$ 5 (5)             | 130.25 | 125.7 - 140  | ---      | 132.85 (2) | ---               | ---      | 130.25 (1)           | 131 (2) AS      | ---            |  |
| U-238   | pCi/g | ---             | 42.8 (1)                    | ---    | ---          | ---      | ---        | ---               | ---      | ---                  | 42.8 (1) GAMMA  | ---            |  |
| V       | ug/g  | ---             | 170 $\pm$ 100 (3)           | 120    | 103 - 280    | 280 (1)  | ---        | ---               | ---      | 111.5 (2)            | ---             | ---            |  |
| Y       | ug/g  | ---             | 172 (1)                     | ---    | ---          | ---      | ---        | ---               | ---      | 172 (1)              | ---             | ---            |  |
| Yb      | ug/g  | ---             | 10.9 $\pm$ 1.2 (4)          | 10.2   | 10 - 12.7    | ---      | 10.2 (1)   | ---               | ---      | 11.2 $\pm$ 1.4 (3)   | ---             | ---            |  |
| Zn      | ug/g  | ---             | 117 (2)                     | ---    | 107 - 127    | 107 (1)  | ---        | ---               | ---      | 127 (1)              | ---             | ---            |  |
| Zr      | ug/g  | ---             | 12 (1)                      | ---    | ---          | ---      | ---        | ---               | ---      | 12 (1)               | ---             | ---            |  |

TABLE 120B-2: INDIVIDUAL DATA FOR NBS SRM 120B (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ug/g)</u> |       |     |        |           | <u>Ca (%)</u>    |       |     |        |           |
| 5                |       |     | ICPES  | 81CHU 01  | 17.8             |       |     | SIMS   | 78MOR 01  |
|                  |       |     |        |           | 32.7             |       | 35  | TCGS   | 78GLA 04  |
|                  |       |     |        |           | 33               |       |     | EXRF   | 80DAL 01  |
| <u>Al (ug/g)</u> |       |     |        |           | 33.78            | 2.07  |     | ICPES  | 82JEN 01  |
| 5100             | 100   |     | AA     | 82JEN 01  | 33.98            | 0.72  |     | AA     | 82JEN 01  |
| 5400             | 500   |     | ICPES  | 82JEN 01  | 35.06            | 1.16  |     | ICPES  | 81CHU 01  |
| 5870             | 20    |     | ICPES  | 81CHU 01  | 35.24            |       | 11  | ICPES  | 83HOF 01  |
| 5980             |       | 11  | ICPES  | 83HOF 01  | 35.24            |       | 11  | ICPES  | 84HOF 01  |
| 6000             |       | 35  | TCGS   | 78GLA 04  | 35.41            | 0.06  | 11  | ICPES  | 84HOF 01  |
| 6000             |       | 11  | ICPES  | 84HOF 01  | 35.41            | 0.06  | 11  | ICPES  | 83HOF 01  |
| 6000             | 480   | 11  | ICPES  | 84HOF 01  | <u>Cd (ug/g)</u> |       |     |        |           |
| 6000             | 500   | 11  | ICPES  | 83HOF 01  | 20.1             |       |     | AA     | 84TER 01  |
| 7780             |       |     | EXRF   | 80DAL 01  | 22               | 10    |     | ICPES  | 81CHU 01  |
| 8500             |       |     | SIMS   | 78MOR 01  | 25.3             |       |     | AA     | 76KRI 03  |
| <u>As (ug/g)</u> |       |     |        |           | <u>Ce (ug/g)</u> |       |     |        |           |
| <                | 5     | L   | ICPES  | 81CHU 01  | 100              |       |     | ITNA   | 85POT 02  |
| 5.52             |       |     | HAA    | 84TER 04  | 118              |       |     | ICPES  | 84MCA 01  |
| <u>Au (ug/g)</u> |       |     |        |           | 128              | 3     |     | ICPES  | 85JAR 02  |
| <                | 3     | L   | ICPES  | 81CHU 01  | 182              | 3.6   |     | ICPES  | 81CHU 01  |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Co (ug/g)</u> |       |     |        |           |
| 61               | 1.2   |     | ICPES  | 81CHU 01  | 2.7              |       |     | ITNA   | 85POT 02  |
|                  |       |     |        |           | 3                | 1     |     | ICPES  | 81CHU 01  |
| <u>Be (ug/g)</u> |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| 2.82             |       |     | AA     | 82TER 02  | 56               |       |     | ITNA   | 85POT 02  |
| 2.82             |       | D   | AA     | 83TER 01  | 63.1             | 1.9   |     | ICPES  | 81CHU 01  |
| 2.9              | 0.06  |     | ICPES  | 81CHU 01  | <u>Cu (ug/g)</u> |       |     |        |           |
| <u>Bi (ng/g)</u> |       |     |        |           | 8.6              | 1     |     | ICPES  | 81CHU 01  |
| <                | 25000 | L   | ICPES  | 81CHU 01  | 11.3             |       |     | AA     | 76KRI 03  |
| 197              |       |     | HAA    | 84TER 02  | <u>Dy (ug/g)</u> |       |     |        |           |
| 197              |       | D   | FAA    | 84TER 03  | 17               |       |     | ICPES  | 84MCA 01  |
| <u>C (%)</u>     |       |     |        |           | 17.3             | 0.2   |     | ICPES  | 85JAR 02  |
| 0.983            |       |     | CB     | 77TIL 01  | <u>Er (ug/g)</u> |       |     |        |           |
| 1.8              |       |     | SIMS   | 78MOR 01  | 11.4             | 0.1   |     | ICPES  | 85JAR 02  |
|                  |       |     |        |           | 12               |       |     | ICPES  | 84MCA 01  |

TABLE 120B-2: INDIVIDUAL DATA FOR NBS SRM 120B (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Eu (ug/g)</u> |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| 3.5              |       |     | ITNA   | 85POT 02  | 110              |       | 35  | TCGS   | 78GLA 04  |
| 3.5              |       |     | ICPES  | 84MCA 01  | 600              | 200   |     | ICPES  | 82JEN 01  |
| 3.89             | 0.07  |     | ICPES  | 85JAR 02  | 660              |       |     | EXRF   | 80DAL 01  |
| 4.8              | 1     |     | ICPES  | 81CHU 01  | 760              |       |     | SIMS   | 78MOR 01  |
|                  |       |     |        |           | 800              | 100   |     | AA     | 82JEN 01  |
|                  |       |     |        |           | 1170             | 25    |     | ICPES  | 81CHU 01  |
| <u>F (%)</u>     |       |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| 3.78             | 0.07  |     | NAA    | 80NOR 01  | 79               |       |     | ITNA   | 85POT 02  |
| 3.82             |       | 35  | IENA   | 79GLA 03  | 89               | 4     |     | ICPES  | 81CHU 01  |
| 3.89             | 0.21  |     | IC     | 82JEN 01  | 90               |       |     | ICPES  | 84MCA 01  |
| 3.93             | 0.09  |     | CPAA   | 84HAN 01  | 92.8             | 1.6   |     | ICPES  | 85JAR 02  |
| 4.04             | 0.47  |     | ISE    | 82JEN 01  |                  |       |     |        |           |
| <u>Fe (ug/g)</u> |       |     |        |           | <u>Li (ug/g)</u> |       |     |        |           |
| 3200             |       |     | SIMS   | 78MOR 01  | <                | 2     | L   | ICPES  | 81CHU 01  |
| 6570             |       |     | ITNA   | 85POT 02  |                  |       |     |        |           |
| 6600             | 200   |     | AA     | 82JEN 01  |                  |       |     |        |           |
| 6990             |       | 11  | ICPES  | 83HOF 01  |                  |       |     |        |           |
| 7000             |       | 11  | ICPES  | 84HOF 01  |                  |       |     |        |           |
| 7200             | 800   |     | ICPES  | 82JEN 01  | 1.6              |       |     | ICPES  | 84MCA 01  |
| 7400             |       | 35  | TCGS   | 78GLA 04  | 1.71             | 0.05  |     | ICPES  | 85JAR 02  |
| 7500             | 300   | 11  | ICPES  | 83HOF 01  | 1.8              |       |     | ITNA   | 85POT 02  |
| 7500             | 350   | 11  | ICPES  | 84HOF 01  |                  |       |     |        |           |
| 7700             |       | 35  | IENA   | 79GLA 03  |                  |       |     |        |           |
| 7827             |       |     | AA     | 76KRI 03  |                  |       |     |        |           |
| 7900             | 200   |     | ICPES  | 81CHU 01  | 51               |       | 35  | TCGS   | 78GLA 04  |
| 7970             |       |     | EXRF   | 80DAL 01  | 1600             | 100   |     | ICPES  | 82JEN 01  |
|                  |       |     |        |           | 1600             | 100   |     | AA     | 82JEN 01  |
|                  |       |     |        |           | 1700             |       | 11  | ICPES  | 84HOF 01  |
|                  |       |     |        |           | 1700             |       | 11  | ICPES  | 83HOF 01  |
|                  |       |     |        |           | 1700             | 60    | 11  | ICPES  | 84HOF 01  |
|                  |       |     |        |           | 1700             | 100   | 11  | ICPES  | 83HOF 01  |
|                  |       |     |        |           | 1870             | 60    |     | ICPES  | 81CHU 01  |
|                  |       |     |        |           | 2800             |       |     | SIMS   | 78MOR 01  |
| <u>Gd (ug/g)</u> |       |     |        |           | <u>Mg (ug/g)</u> |       |     |        |           |
| 17.8             | 0.3   |     | ICPES  | 85JAR 02  | 51               |       | 35  | TCGS   | 78GLA 04  |
| 18               |       |     | ICPES  | 84MCA 01  | 1600             | 100   |     | ICPES  | 82JEN 01  |
| 21               | 0.6   |     | ICPES  | 81CHU 01  | 1600             | 100   |     | AA     | 82JEN 01  |
|                  |       |     |        |           | 1700             |       | 11  | ICPES  | 84HOF 01  |
|                  |       |     |        |           | 1700             |       | 11  | ICPES  | 83HOF 01  |
|                  |       |     |        |           | 1700             | 60    | 11  | ICPES  | 84HOF 01  |
|                  |       |     |        |           | 1700             | 100   | 11  | ICPES  | 83HOF 01  |
|                  |       |     |        |           | 1870             | 60    |     | ICPES  | 81CHU 01  |
|                  |       |     |        |           | 2800             |       |     | SIMS   | 78MOR 01  |
| <u>Hf (ug/g)</u> |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 2                |       |     | ITNA   | 85POT 02  | 130              |       |     | SIMS   | 78MOR 01  |
|                  |       |     |        |           | 150              |       |     | EXRF   | 80DAL 01  |
|                  |       |     |        |           | 230              | 15    |     | ICPES  | 82JEN 01  |
|                  |       |     |        |           | 240              | 20    |     | AA     | 82JEN 01  |
|                  |       |     |        |           | 246              |       |     | AA     | 76KRI 03  |
|                  |       |     |        |           | 260              | 7.8   |     | ICPES  | 81CHU 01  |
| <u>Ho (ug/g)</u> |       |     |        |           | <u>Mo (ug/g)</u> |       |     |        |           |
| 3.8              |       |     | ICPES  | 84MCA 01  | <                | 5     | L   | ICPES  | 81CHU 01  |
| 4.03             | 0.04  |     | ICPES  | 85JAR 02  |                  |       |     |        |           |

TABLE 120B-2: INDIVIDUAL DATA FOR NBS SRM 120B (cont.)

| Conc                  | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Na (ug/g)</u>      |       |     |        |           | <u>S (ug/g)</u>  |       |     |        |           |
| 2300                  | 100   |     | AA     | 82JEN 01  | 2200             |       |     | EXRF   | 80DAL 01  |
| 2630                  | 70    |     | ICPES  | 81CHU 01  |                  |       |     |        |           |
| 2800                  |       | 35  | TCGS   | 78GLA 04  | <u>Sb (ug/g)</u> |       |     |        |           |
| 2900                  |       |     | SIMS   | 78MOR 01  | 1.62             |       |     | HAA    | 84TER 04  |
| <u>Nd (ug/g)</u>      |       |     |        |           | 10               |       |     | ICPES  | 81CHU 01  |
| 68                    |       |     | ITNA   | 85POT 02  | <u>Sc (ug/g)</u> |       |     |        |           |
| 77                    |       |     | ICPES  | 84MCA 01  | 6.4              |       |     | ITNA   | 85POT 02  |
| 79.5                  | 0.9   |     | ICPES  | 85JAR 02  | <u>Se (ug/g)</u> |       |     |        |           |
| 127                   | 25    |     | ICPES  | 81CHU 01  | <                | 30    | L   | ICPES  | 81CHU 01  |
| <u>Ni (ug/g)</u>      |       |     |        |           | <u>Si (%)</u>    |       |     |        |           |
| 12                    |       | 35  | IENA   | 79GLA 03  | 2.01             |       |     | EXRF   | 80DAL 01  |
| 15.4                  | 1     |     | ICPES  | 81CHU 01  | 2.12             |       | 35  | IENA   | 79GLA 03  |
| 22.9                  |       |     | AA     | 76KRI 03  | 2.12             | 0.19  |     | ICPES  | 82JEN 01  |
| <u>O (%)</u>          |       |     |        |           | 2.19             |       | 35  | TCGS   | 78GLA 04  |
| 36                    | 0.5   |     | 14NAA  | 80NOR 01  | 2.21             | 0.01  |     | AA     | 82KIS 01  |
| <u>P (%)</u>          |       |     |        |           | 2.23             | 0.03  | 11  | ICPES  | 84HOF 01  |
| 12.97                 | 0.79  |     | IC     | 82JEN 01  | 2.23             | 0.03  | 11  | ICPES  | 83HOF 01  |
| 13.5                  |       |     | SIMS   | 78MOR 01  | 2.32             |       | 11  | ICPES  | 84HOF 01  |
| 14.7                  |       | 35  | TCGS   | 78GLA 04  | 2.32             |       | 11  | ICPES  | 83HOF 01  |
| 14.96                 | 0.14  | 11  | ICPES  | 84HOF 01  | 2.41             | 0.24  |     | AA     | 82JEN 01  |
| 15.04                 | 0.14  | 11  | ICPES  | 83HOF 01  | <u>Sm (ug/g)</u> |       |     |        |           |
| 15.12                 |       | 11  | ICPES  | 84HOF 01  | 15.8             | 0.2   |     | ICPES  | 85JAR 02  |
| 15.19                 | 1.23  |     | ICPES  | 82JEN 01  | 16               |       |     | ICPES  | 84MCA 01  |
| 15.2                  |       | 11  | ICPES  | 83HOF 01  | 38               | 1.9   |     | ICPES  | 81CHU 01  |
| 15.21                 | 0.38  |     | ICPES  | 81CHU 01  | <u>Sn (ug/g)</u> |       |     |        |           |
| 15.9                  |       |     | EXRF   | 80DAL 01  | <                | 3     | L   | ICPES  | 81CHU 01  |
| <u>Pb (ug/g)</u>      |       |     |        |           | 0.41             | 0.05  |     | FAA    | 85TER 01  |
| 13.1                  |       |     | AA     | 84TER 01  | <u>Sr (ug/g)</u> |       |     |        |           |
| 25                    | 5     |     | ICPES  | 81CHU 01  | 705              | 14    |     | ICPES  | 81CHU 01  |
| 32.7                  |       |     | AA     | 76KRI 03  | <u>Ta (ng/g)</u> |       |     |        |           |
| <u>Pr (ug/g)</u>      |       |     |        |           | 200              |       |     | ITNA   | 85POT 02  |
| 17                    |       |     | ICPES  | 84MCA 01  | <u>Tb (ug/g)</u> |       |     |        |           |
| 17.9                  | 0.2   |     | ICPES  | 85JAR 02  | 2                |       |     | ITNA   | 85POT 02  |
| <u>Ra-226 (pCi/g)</u> |       |     |        |           |                  |       |     |        |           |
| 43.3                  | 0.6   |     | GAMMA  | 83KIM 01  |                  |       |     |        |           |

TABLE 120B-2: INDIVIDUAL DATA FOR NBS SRM 120B (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                 | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|----------------------|-------|-----|--------|-----------|
| <u>Th (ug/g)</u> |       |     |        |           | <u>U-238 (pCi/g)</u> |       |     |        |           |
| <                | 25    | L   | ICPES  | 81CHU 01  | 42.8                 | 0.8   |     | GAMMA  | 83KIM 01  |
| 7.2              |       |     | ITNA   | 85POT 02  |                      |       |     |        |           |
| 7.9              | 0.8   |     | AS     | 82ROE 01  | <u>V (ug/g)</u>      |       |     |        |           |
| 9.05             | 0.4   |     | AS     | 82THO 02  | 103                  | 3.1   |     | ICPES  | 81CHU 01  |
| <u>Ti (ug/g)</u> |       |     |        |           | 120                  | 10    |     | ICPES  | 82JEN 01  |
| 590              |       |     | SIMS   | 78MOR 01  | 280                  | 40    |     | AA     | 82JEN 01  |
| 740              | 20    |     | ICPES  | 81CHU 01  | <u>Y (ug/g)</u>      |       |     |        |           |
| 780              |       | 35  | IENA   | 79GLA 03  | 172                  | 5     |     | ICPES  | 85JAR 02  |
| 950              |       | 35  | TCGS   | 78GLA 04  | <u>Yb (ug/g)</u>     |       |     |        |           |
| 950              | 10    | 11  | ICPES  | 83HOF 01  | 10                   |       |     | ICPES  | 84MCA 01  |
| 950              | 10    |     | ICPES  | 84HOF 01  | 10.2                 |       |     | ITNA   | 85POT 02  |
| 1200             |       |     | EXRF   | 80DAL 01  | 10.8                 | 0.2   |     | ICPES  | 85JAR 02  |
| <u>Tm (ug/g)</u> |       |     |        |           | 12.7                 | 0.4   |     | ICPES  | 81CHU 01  |
| 1.1              |       |     | ITNA   | 85POT 02  | <u>Zn (ug/g)</u>     |       |     |        |           |
| <u>U (ug/g)</u>  |       |     |        |           | 107                  |       |     | AA     | 76KRI 03  |
| 125.7            | 0.6   |     | DNA    | 86GAU 01  | 127                  | 3.9   |     | ICPES  | 81CHU 01  |
| 130              | 5     |     | AS     | 82ROE 01  | <u>Zr (ug/g)</u>     |       |     |        |           |
| 130.25           | 1.5   |     | ICPES  | 83NOR 01  | 12                   | 1.2   |     | ICPES  | 81CHU 01  |
| 132              | 2     |     | AS     | 82THO 02  |                      |       |     |        |           |
| 140              |       |     | ITNA   | 85POT 02  |                      |       |     |        |           |

TABLE 181-1: COMPILED DATA FOR NBS SRM 181 LITHIUM ORE (SPODUMENE)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS         | CONSENSUS | METHOD |
|---------|-------|-------------|-----------|--------|
| Bi      | ng/g  | ---         | 892 (1)   | AA     |
| K       | ug/g  | 2500        | ---       | ---    |
| Li      | %     | 2.97 ± 0.02 | ---       | ---    |
| Na      | ug/g  | 5900        | ---       | ---    |

TABLE 182-1: COMPILED DATA FOR NBS SRM 182 LITHIUM ORE (PETALITE)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS         |
|---------|-------|-------------|
| K       | ug/g  | 830         |
| Li      | %     | 2.02 ± 0.02 |
| Na      | ug/g  | 3000        |
| Rb      | ug/g  | 275         |

TABLE 183-1: COMPILED DATA FOR NBS SRM 183 LITHIUM ORE (LEPIDOLITE)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS         |
|---------|-------|-------------|
| Cs      | ug/g  | 2800        |
| K       | %     | 6.6         |
| Li      | %     | 1.92 ± 0.02 |
| Na      | ug/g  | 1500        |
| Rb      | %     | 3.2         |

TABLE 181-2: INDIVIDUAL DATA FOR NBS SRM 181  
(revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|
| <u>Bi (ng/g)</u> |       |     |        |           |
| 892              |       |     | FAA    | 84TER 03  |

TABLE 278-1: COMPILED DATA FOR NBS SRM 278 OBSIDIAN ROCK (revised 3/1/86)

| ELE   | UNITS | NBS         |      | CONSENSUS   |      | MEDIAN | RANGE       | NAA         |     | ICPES | XRF  |      | OTHER METHODS |             |     |        |
|-------|-------|-------------|------|-------------|------|--------|-------------|-------------|-----|-------|------|------|---------------|-------------|-----|--------|
|       |       | Mean        | ± SD | Mean        | ± SD |        |             | Mean        | (n) |       | Mean | (n)  | Mean          | ± SD        | (n) | Method |
| Al    | %     | 7.49 ± 0.08 |      | 7.61 ± 0.13 | (7)  | 7.56   | 7.43 - 7.8  | 7.52        | (2) | 7.78  | (1)  | 7.56 | (1)           | 7.63 ± 0.14 | (3) | TCGS   |
| As    | ug/g  | ---         |      | 4.9 ± 0.2   | (3)  | 5.06   | 4.68 - 5.1  | 4.9 ± 0.2   | (3) | ---   |      | ---  |               | ---         |     |        |
| Au    | ng/g  | ---         |      | 2.12        | (2)  | ---    | 1.6 - 2.64  | 2.12        | (2) | ---   |      | ---  |               | ---         |     |        |
| B     | ug/g  | 25          |      | 25 ± 2      | (6)  | 24.9   | 21 - 27.9   | ---         |     | ---   |      | ---  |               | 25.6 ± 1.4  | (5) | TCGS   |
| B     | ug/g  | ---         |      | ---         |      | ---    | ---         | ---         |     | ---   |      | ---  |               | 21          | (1) | OES    |
| Ba    | ug/g  | 1140        |      | 1000 ± 90   | (5)  | 1050   | 885 - 1080  | 1019 ± 90   | (4) | 928   | (1)  | ---  |               | ---         |     |        |
| Be    | ug/g  | ---         |      | 1.9         | (2)  | ---    | 1.4 - 2.4   | ---         |     | 2.4   | (1)  | ---  |               | 1.4         | (1) | OES    |
| Br    | ug/g  | ---         |      | 2.8 ± 0.2   | (3)  | 2.65   | 2.61 - 2.99 | 2.75 ± 0.21 | (3) | ---   |      | ---  |               | ---         |     |        |
| C-I   | ug/g  | 27          |      | ---         |      | ---    | ---         | ---         |     | ---   |      | ---  |               | ---         |     |        |
| C-T   | ug/g  | 500         |      | ---         |      | ---    | ---         | ---         |     | ---   |      | ---  |               | ---         |     |        |
| Ca    | ug/g  | 7030 ± 20   |      | 7180 ± 170  | (7)  | 7100   | 7000 - 7500 | 7250        | (2) | 7200  | (1)  | 7080 | (1)           | 7170 ± 110  | (3) | TCGS   |
| Cd    | ng/g  | ---         |      | 180         | (2)  | ---    | 180 - 180   | ---         |     | ---   |      | ---  |               | 180         | (2) | TCGS   |
| Ce    | ug/g  | 62.2        |      | 60 ± 5      | (8)  | 56.5   | 54.4 - 68   | 60 ± 5      | (7) | 61    | (1)  | ---  |               | ---         |     |        |
| Cl    | ug/g  | ---         |      | 622 ± 14    | (4)  | 610    | 610 - 640   | ---         |     | ---   |      | ---  |               | 620 ± 17    | (3) | TCGS   |
| Cl    | ug/g  | ---         |      | ---         |      | ---    | ---         | ---         |     | ---   |      | ---  |               | 627         | (1) | ISE    |
| Co    | ug/g  | 1.5         |      | 2.1 ± 0.3   | (6)  | 2      | 1.85 - 2.7  | 2.1 ± 0.3   | (5) | 2     | (1)  | ---  |               | ---         |     |        |
| Cr    | ug/g  | 6.1         |      | 6.4 ± 0.9   | (5)  | 6.42   | 5 - 7.5     | 6.8 ± 0.5   | (4) | 5     | (1)  | ---  |               | ---         |     |        |
| Cs    | ug/g  | 5.5         |      | 5.1 ± 0.2   | (7)  | 5.12   | 4.9 - 5.46  | 5.1 ± 0.2   | (7) | ---   |      | ---  |               | ---         |     |        |
| Cu    | ug/g  | 5.9 ± 0.2   |      | < 5         |      | ---    | ---         | ---         |     | ---   |      | < 5  |               | ---         |     |        |
| Dy    | ug/g  | ---         |      | 6.5 ± 0.3   | (3)  | 6.51   | 6.2 - 6.8   | 6.36        | (2) | 6.8   | (1)  | ---  |               | ---         |     |        |
| Er    | ug/g  | ---         |      | 3.9         | (2)  | ---    | 3.66 - 4.1  | 3.66        | (1) | 4.1   | (1)  | ---  |               | ---         |     |        |
| Eu    | ng/g  | 840         |      | 800 ± 25    | (8)  | 790    | 764 - 830   | 800 ± 24    | (7) | 770   | (1)  | ---  |               | ---         |     |        |
| F     | ug/g  | 500         |      | ---         |      | ---    | ---         | ---         |     | ---   |      | ---  |               | ---         |     |        |
| Fe    | %     | 1.43 ± 0.02 |      | 1.46 ± 0.08 | (9)  | 1.47   | 1.32 - 1.55 | 1.54 ± 0.02 | (3) | 1.47  | (1)  | 1.45 | (1)           | 1.41 ± 0.10 | (4) | TCGS   |
| Fe203 | %     | ---         |      | 0.49        | (1)  | ---    | ---         | ---         |     | ---   |      | ---  |               | 0.49        | (1) | CALC   |
| FeO   | %     | 1.36 ± 0.02 |      | 1.38        | (2)  | ---    | 1.35 - 1.42 | ---         |     | ---   |      | ---  |               | 1.42        | (1) | COLOR  |
| FeO   | %     | ---         |      | ---         |      | ---    | ---         | ---         |     | ---   |      | ---  |               | 1.35        | (1) | TITR   |
| Ga    | ug/g  | ---         |      | 11          | (2)  | ---    | 10 - 12.47  | 11          | (2) | 22    | (1)  | ---  |               | ---         |     |        |
| Gd    | ug/g  | 5.3         |      | 5.6 ± 0.4   | (9)  | 5.5    | 4.96 - 6.1  | 5.3 ± 0.7   | (3) | 6.1   | (1)  | ---  |               | 5.49 ± 0.38 | (6) | TCGS   |
| H     | ug/g  | ---         |      | 660 ± 200   | (3)  | 550    | 530 - 890   | ---         |     | ---   |      | ---  |               | 660 ± 200   | (3) | TCGS   |
| H2O+  | %     | ---         |      | 0.30        | (1)  | ---    | ---         | ---         |     | ---   |      | ---  |               | 0.3         | (1) | COUL   |
| H2O-  | %     | ---         |      | 0.05        | (1)  | ---    | ---         | ---         |     | ---   |      | ---  |               | 0.05        | (1) | COUL   |
| Hf    | ug/g  | 8.4         |      | 8.76 ± 0.14 | (3)  | 8.82   | 8.6 - 8.86  | 8.76 ± 0.14 | (3) | ---   |      | ---  |               | ---         |     |        |
| Ho    | ug/g  | ---         |      | 1.31 ± 0.16 | (3)  | 1.23   | 1.2 - 1.5   | 1.22        | (2) | 1.5   | (1)  | ---  |               | ---         |     |        |

TABLE 278-1 COMPILED DATA FOR NBS SRM 278 OBSIDIAN ROCK (cont.)

| ELE | UNITS | NBS          |      | CONSENSUS   |      | MEDIAN | RANGE          | NAA         |     | ICPES     |     | XRF       |     | OTHER METHODS |           |
|-----|-------|--------------|------|-------------|------|--------|----------------|-------------|-----|-----------|-----|-----------|-----|---------------|-----------|
|     |       | Mean ± SD    | (n)  | Mean ± SD   | (n)  |        |                | Mean ± SD   | (n) | Mean ± SD | (n) | Mean ± SD | (n) | Method        |           |
| In  | ng/g  | ---          | (1)  | 43.6        | (1)  | ---    | ---            | 43.6        | (1) | ---       | --- | ---       | --- | ---           | ---       |
| K   | %     | 3.45 ± 0.02  | (8)  | 3.38 ± 0.10 | (8)  | 3.34   | 3.28 - 3.58    | 3.35        | (2) | 3.34      | (1) | 3.4       | (1) | 3.41 ± 0.13   | (4) TCGS  |
| La  | ug/g  | ---          | (8)  | 33 ± 4      | (8)  | 33     | 27.95 - 37.8   | 33 ± 4      | (7) | 31        | (1) | 24        | (1) | ---           | ---       |
| Li  | ug/g  | ---          | (1)  | 47          | (1)  | ---    | ---            | ---         | --- | 47        | (1) | ---       | --- | ---           | ---       |
| Lu  | ng/g  | 730          | (7)  | 820 ± 95    | (7)  | 820    | 710 - 947      | 840 ± 90    | (6) | 710       | (1) | ---       | --- | ---           | ---       |
| Mg  | ug/g  | 1400         | (2)  | 1485        | (2)  | ---    | 1430 - 1540    | ---         | --- | 1430      | (1) | 1540      | (1) | ---           | ---       |
| Mn  | ug/g  | 400 ± 15     | (9)  | 390 ± 21    | (9)  | 382    | 367 - 430      | 386 ± 21    | (4) | 373       | (1) | 395       | (1) | 397 ± 28      | (3) TCGS  |
| Mo  | ug/g  | ---          | (3)  | 3.2 ± 1.0   | (3)  | 3.73   | 2 - 3.73       | 3.73        | (2) | 2         | (1) | ---       | --- | ---           | ---       |
| Na  | %     | 3.59 ± 0.04  | (7)  | 3.50 ± 0.04 | (7)  | 3.49   | 3.44 - 3.56    | 3.45 ± 0.11 | (4) | 3.44      | (1) | 3.56      | (1) | 3.51          | (2) TCGS  |
| Nb  | ug/g  | ---          | (2)  | 16          | (2)  | ---    | 12.7 - 18.4    | ---         | --- | 12.7      | (1) | 18.4      | (1) | ---           | ---       |
| Nd  | ug/g  | ---          | (7)  | 29 ± 2      | (7)  | 29.5   | 26 - 33.5      | 29 ± 3      | (4) | 28.6      | (1) | ---       | --- | 30            | (2) TCGS  |
| Ni  | ug/g  | 3.6 ± 0.3    | (2)  | 12          | (2)  | ---    | 4 - 19         | ---         | --- | 4         | (1) | 19        | (1) | ---           | ---       |
| P   | ug/g  | 160 ± 13     | (2)  | 140         | (2)  | ---    | 110 - 170      | ---         | --- | 170       | (1) | 110       | (1) | ---           | ---       |
| Pb  | ug/g  | 16.4 ± 0.2   | (2)  | 17          | (2)  | ---    | 16.22 - 18     | ---         | --- | 18        | (1) | ---       | --- | 16.22         | (1) IDMS  |
| Pr  | ug/g  | ---          | (2)  | 8           | (2)  | ---    | 7.48 - 8.6     | 7.48        | (1) | 8.6       | (1) | ---       | --- | ---           | ---       |
| Rb  | ug/g  | 127.5 ± 0.3  | (6)  | 133 ± 6     | (6)  | 130    | 128.4 - 143.17 | 135 ± 6     | (4) | ---       | --- | 128.7     | (2) | ---           | ---       |
| Sb  | ug/g  | 1.5          | (5)  | 1.72 ± 0.13 | (5)  | 1.7    | 1.59 - 1.9     | 1.72 ± 0.13 | (5) | ---       | --- | ---       | --- | ---           | ---       |
| Sc  | ug/g  | 5.1          | (8)  | 5.1 ± 0.5   | (8)  | 5.1    | 4.16 - 6       | 5.16 ± 0.14 | (6) | 6         | (1) | ---       | --- | ---           | ---       |
| Si  | %     | 34.11 ± 0.06 | (4)  | 33.4 ± 0.6  | (4)  | 33.1   | 33.1 - 34.25   | ---         | --- | ---       | --- | 34.25     | (1) | 33.13 ± 0.06  | (3) TCGS  |
| Sm  | ug/g  | 5.7          | (11) | 5.8 ± 0.2   | (11) | 5.8    | 5.45 - 6.2     | 5.81 ± 0.13 | (5) | 6.8       | (1) | ---       | --- | 5.8 ± 0.29    | (6) TCGS  |
| Sr  | ug/g  | 63.5 ± 0.1   | (4)  | 61 ± 3      | (4)  | 60     | 58 - 66        | 58          | (1) | 60        | (1) | 63.9      | (2) | ---           | ---       |
| Ta  | ug/g  | 1.2          | (4)  | 1.28 ± 0.06 | (4)  | 1.23   | 1.23 - 1.34    | 1.28 ± 0.06 | (4) | ---       | --- | ---       | --- | ---           | ---       |
| Tb  | ug/g  | 1            | (6)  | 1.10 ± 0.16 | (6)  | 1.12   | 0.8 - 1.23     | 1.10 ± 0.16 | (6) | ---       | --- | ---       | --- | ---           | ---       |
| Th  | ug/g  | 12.4 ± 0.3   | (7)  | 12.8 ± 0.4  | (7)  | 12.8   | 12.27 - 13.2   | 12.7 ± 0.4  | (6) | 13        | (1) | ---       | --- | ---           | ---       |
| Ti  | ug/g  | 1470 ± 40    | (6)  | 1420 ± 70   | (6)  | 1420   | 1330 - 1500    | ---         | --- | 1480      | (1) | 1420      | (1) | 1400 ± 90     | (4) TCGS  |
| Tl  | ng/g  | 540 ± 40     | (3)  | ---         | (3)  | ---    | ---            | ---         | --- | ---       | --- | ---       | --- | ---           | ---       |
| Tm  | ng/g  | ---          | (3)  | 340 ± 50    | (3)  | 330    | 301 - 400      | 340 ± 50    | (3) | 500       | (1) | ---       | --- | ---           | ---       |
| U   | ug/g  | 4.58 ± 0.04  | (10) | 4.53 ± 0.23 | (10) | 4.51   | 4.20 - 4.96    | 4.58 ± 0.23 | (8) | ---       | --- | ---       | --- | 4.51          | (1) IDMS  |
| U   | ug/g  | ---          | (3)  | ---         | (3)  | ---    | ---            | ---         | --- | ---       | --- | ---       | --- | 4.21          | (1) FLUOR |
| V   | ug/g  | ---          | (3)  | 15 ± 8      | (3)  | 12     | 8 - 24         | 12          | (1) | 8         | (1) | 24        | (1) | ---           | ---       |
| Y   | ug/g  | ---          | (3)  | 41 ± 3      | (3)  | 41     | 38.3 - 44.5    | ---         | --- | 38.3      | (1) | 42.75     | (2) | ---           | ---       |
| Yb  | ug/g  | 4.5          | (8)  | 4.5 ± 0.6   | (8)  | 4.68   | 3.58 - 5.09    | 4.5 ± 0.6   | (7) | 4.68      | (1) | ---       | --- | ---           | ---       |
| Zn  | ug/g  | 55           | (4)  | 54 ± 4      | (4)  | 54     | 47.8 - 57.4    | 55.7        | (2) | 47.8      | (1) | 57        | (1) | ---           | ---       |
| Zr  | ug/g  | ---          | (5)  | 295 ± 11    | (5)  | 290    | 285 - 311      | 298         | (2) | 290       | (1) | 295.4     | (2) | ---           | ---       |

TABLE 278-2: INDIVIDUAL DATA FOR NBS SRM 278 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>    |       |     |        |           | <u>Ca (ug/g)</u> |       |     |        |           |
| 7.43             | 0.57  |     | ITNA   | 82GRA 01  | 6000             | 1000  |     | TCGS   | 82GRA 01  |
| 7.55             | 0.08  |     | TCGS   | 83AND 01  | 7000             | 570   |     | ITNA   | 85GLA 01  |
| 7.55             | 0.08  |     | TCGS   | 85AND 01  | 7080             | 50    |     | WXRf   | 85GLA 01  |
| 7.56             | 0.06  |     | WXRf   | 85GLA 01  | 7100             | 300   |     | TCGS   | 85AND 01  |
| 7.62             | 0.11  |     | ITNA   | 85GLA 01  | 7100             | 300   |     | TCGS   | 83AND 01  |
| 7.78             | 0.08  |     | ICPES  | 83CRO 01  | 7200             | 100   |     | ICPES  | 83CRO 01  |
| 7.8              | 0.2   |     | TCGS   | 82GRA 01  | 7300             | 300   |     | TCGS   | 82VOG 01  |
|                  |       |     |        |           | 7500             | 1200  |     | ITNA   | 82GRA 01  |
| <u>As (ug/g)</u> |       |     |        |           | <u>Cd (ng/g)</u> |       |     |        |           |
| 4.68             | 0.13  |     | ITNA   | 81AHM 01  | 180              | 60    |     | TCGS   | 85AND 01  |
| 5.06             | 1.29  |     | ITNA   | 82GRA 01  | 180              | 60    |     | TCGS   | 83AND 01  |
| 5.1              | 0.88  |     | ITNA   | 82VOG 01  |                  |       |     |        |           |
| <u>Au (ng/g)</u> |       |     |        |           | <u>Ce (ug/g)</u> |       |     |        |           |
| 1.6              | 0.8   |     | ITNA   | 82GRA 01  | 54.4             | 2.2   |     | ITNA   | 84ODD 01  |
| 2.64             | 0.52  |     | ITNA   | 82VOG 01  | 55.8             | 0.3   |     | RTNA   | 84ODD 01  |
|                  |       |     |        |           | 56.5             | 1.9   |     | ITNA   | 81AHM 01  |
|                  |       |     |        |           | 56.5             | 2.9   |     | ITNA   | 80AHM 01  |
|                  |       |     |        |           | 59.4             | 6.8   |     | ITNA   | 82GRA 01  |
|                  |       |     |        |           | 61               | 1     |     | ICPES  | 83CRO 01  |
|                  |       |     |        |           | 66.5             | 9.3   |     | ITNA   | 82VOG 01  |
|                  |       |     |        |           | 68               | 1     |     | ITNA   | 85GLA 01  |
|                  |       |     |        |           | 90               | 30    |     | WXRf   | 85GLA 01  |
| <u>B (ug/g)</u>  |       |     |        |           | <u>Cl (ug/g)</u> |       |     |        |           |
| 21               |       |     | OES    | 83MIL 01  | 610              | 7     |     | TCGS   | 85AND 01  |
| 24.1             | 0.4   |     | TCGS   | 83AND 01  | 610              | 7     |     | TCGS   | 83AND 01  |
| 24.9             | 0.5   |     | TCGS   | 82VOG 01  | 627              | 14    |     | ISE    | 86ELS 01  |
| 25.2             | 0.4   |     | TCGS   | 82GRA 01  | 640              | 90    |     | TCGS   | 82GRA 01  |
| 26               | 3     |     | TCGS   | 84GLA 01  |                  |       |     |        |           |
| 27.9             | 0.4   |     | TCGS   | 85AND 01  |                  |       |     |        |           |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Co (ug/g)</u> |       |     |        |           |
| 600              | 160   |     | WXRf   | 85GLA 01  | 1.85             | 0.18  |     | ITNA   | 82GRA 01  |
| 885              | 54    |     | ITNA   | 81AHM 01  | 1.89             | 0.31  |     | ITNA   | 82VOG 01  |
| 928              | 9     |     | ICPES  | 83CRO 01  | 2                | 1     |     | ICPES  | 83CRO 01  |
| 1050             | 40    |     | ITNA   | 85GLA 01  | 2.04             | 0.22  |     | ITNA   | 81AHM 01  |
| 1060             | 40    |     | ITNA   | 82VOG 01  | 2.08             | 0.1   |     | ITNA   | 85GLA 01  |
| 1080             | 58    |     | ITNA   | 82GRA 01  | 2.6              | 2.7   |     | WXRf   | 85GLA 01  |
|                  |       |     |        |           | 2.7              | 0.2   |     | ITNA   | 84GLA 11  |
| <u>Be (ug/g)</u> |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| 1.4              |       |     | OES    | 83MIL 01  | 2                | 7     |     | WXRf   | 85GLA 01  |
| 2.4              | 0.1   |     | ICPES  | 83CRO 01  | 5                | 0.5   |     | ICPES  | 83CRO 01  |
|                  |       |     |        |           | 6.34             | 0.93  |     | ITNA   | 82GRA 01  |
|                  |       |     |        |           | 6.42             | 0.28  |     | ITNA   | 82VOG 01  |
|                  |       |     |        |           | 6.79             | 0.44  |     | ITNA   | 81AHM 01  |
|                  |       |     |        |           | 7.5              | 1.2   |     | ITNA   | 86GAU 01  |
| <u>Br (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 2.61             | 0.62  |     | ITNA   | 82GRA 01  |                  |       |     |        |           |
| 2.65             | 0.2   |     | ITNA   | 81AHM 01  |                  |       |     |        |           |
| 2.99             | 1.01  |     | ITNA   | 82VOG 01  |                  |       |     |        |           |

TABLE 278-2: INDIVIDUAL DATA FOR NBS SRM 278 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Cs (ug/g)</u> |       |     |        |           | <u>FEO (%)</u>   |       |     |        |           |
| 4.9              |       |     | ITNA   | 86GAU 01  | 1.35             |       |     | TITR   | 84GOL 01  |
| 4.91             | 0.14  |     | ITNA   | 84GLA 11  | 1.42             | 0.1   |     | COLOR  | 85GLA 01  |
| 4.92             | 0.34  |     | ITNA   | 82GRA 01  |                  |       |     |        |           |
| 5.12             | 0.44  |     | ITNA   | 81AHM 01  | <u>Ga (ug/g)</u> |       |     |        |           |
| 5.3              | 0.25  |     | ITNA   | 82VOG 01  | 10               | 3     |     | ITNA   | 82GRA 01  |
| 5.3              | 0.7   |     | ITNA   | 84GLA 02  | 12.47            | 2.53  |     | ITNA   | 82VOG 01  |
| 5.46             | 0.07  |     | ITNA   | 85GLA 01  | 22               | 4     |     | ICPES  | 83CRO 01  |
| <u>Cu (ug/g)</u> |       |     |        |           | <u>Gd (ug/g)</u> |       |     |        |           |
| <                | 5     |     | ICPES  | 83CRO 01  | 4.5              |       |     | ITNA   | 82GRA 01  |
| <u>Dy (ug/g)</u> |       |     |        |           | 4.96             | 0.08  |     | TCGS   | 83AND 01  |
| 6.2              | 0.1   |     | ITNA   | 84ODD 01  | 5.28             | 0.06  |     | TCGS   | 82VOG 01  |
| 6.51             | 0.2   |     | RTNA   | 84ODD 01  | 5.34             | 0.08  |     | TCGS   | 82GRA 01  |
| 6.8              | 0.4   |     | ICPES  | 83CRO 01  | 5.5              | 0.5   | 4   | TCGS   | 85GLA 05  |
| <u>Er (ug/g)</u> |       |     |        |           | 5.65             | 0.07  |     | ITNA   | 84ODD 01  |
| 3.66             | 0.07  |     | RTNA   | 84ODD 01  | 5.7              | 0.03  |     | RTNA   | 84ODD 01  |
| 4.1              | 0.3   |     | ICPES  | 83CRO 01  | 5.9              | 0.5   | 4   | TCGS   | 85GLA 05  |
| <u>Eu (ng/g)</u> |       |     |        |           | 5.95             | 0.08  |     | TCGS   | 85AND 01  |
| 764              | 56    |     | ITNA   | 82GRA 01  | 6.1              | 0.3   |     | ICPES  | 83CRO 01  |
| 770              | 30    |     | ICPES  | 83CRO 01  | 37.74            | 1.5   |     | ITNA   | 80AHM 01  |
| 780              | 20    |     | RTNA   | 84ODD 01  | 37.74            | 1.5   |     | ITNA   | 81AHM 01  |
| 790              | 40    |     | ITNA   | 85GLA 01  | <u>H (ug/g)</u>  |       |     |        |           |
| 796              | 9     |     | ITNA   | 82VOG 01  | 530              | 45    |     | TCGS   | 83AND 01  |
| 820              | 30    |     | ITNA   | 80AHM 01  | 550              | 50    |     | TCGS   | 85AND 01  |
| 820              | 30    |     | ITNA   | 81AHM 01  | 890              | 120   |     | TCGS   | 82VOG 01  |
| 830              | 20    |     | ITNA   | 84ODD 01  | <u>H2O+ (%)</u>  |       |     |        |           |
| <u>Fe (%)</u>    |       |     |        |           | 0.3              | 0.02  |     | COUL   | 85GLA 01  |
| 1.14             | 0.23  |     | ITNA   | 81AHM 01  | <u>H2O- (%)</u>  |       |     |        |           |
| 1.32             | 0.17  |     | TCGS   | 82GRA 01  | 0.05             | 0.01  |     | COUL   | 85GLA 01  |
| 1.39             | 0.05  |     | TCGS   | 83AND 01  | <u>Hf (ug/g)</u> |       |     |        |           |
| 1.39             | 0.05  |     | TCGS   | 85AND 01  | 6.41             | 0.24  |     | ITNA   | 81AHM 01  |
| 1.45             | 0.02  |     | WXRF   | 85GLA 01  | 8.6              | 0.2   |     | ITNA   | 85GLA 01  |
| 1.47             | 0.01  |     | ICPES  | 83CRO 01  | 8.82             | 0.73  |     | ITNA   | 82GRA 01  |
| 1.52             | 0.05  |     | ITNA   | 82GRA 01  | 8.86             | 0.73  |     | ITNA   | 82VOG 01  |
| 1.54             | 0.01  |     | ITNA   | 82VOG 01  | <u>Ho (ug/g)</u> |       |     |        |           |
| 1.55             | 0.04  |     | ITNA   | 85GLA 01  | 1.2              | 0.04  |     | RTNA   | 84ODD 01  |
| 1.55             | 0.06  |     | TCGS   | 82VOG 01  | 1.23             | 0.06  |     | ITNA   | 84ODD 01  |
| <u>FE2O3 (%)</u> |       |     |        |           | 1.5              | 0.1   |     | ICPES  | 83CRO 01  |
| 0.49             | 0.11  |     | CALC   | 85GLA 01  |                  |       |     |        |           |

TABLE 278-2: INDIVIDUAL DATA FOR NBS SRM 278 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>In (ng/g)</u> |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 43.6             | 2.7   |     | ITNA   | 81AHM 01  | 367              | 15    |     | ITNA   | 82VOG 01  |
|                  |       |     |        |           | 370              | 15    |     | ITNA   | 85GLA 01  |
| <u>K (%)</u>     |       |     |        |           |                  |       |     |        |           |
| 3.28             | 0.11  |     | ITNA   | 85GLA 01  | 373              | 3     |     | ICPES  | 83CRO 01  |
| 3.31             | 0.01  |     | TCGS   | 83AND 01  | 380              | 50    |     | TCGS   | 83AND 01  |
| 3.31             | 0.01  |     | TCGS   | 85AND 01  | 382              | 52    |     | TCGS   | 85AND 01  |
| 3.34             | 0.03  |     | ICPES  | 83CRO 01  | 395              | 40    |     | WXRF   | 85GLA 01  |
| 3.4              | 0.01  |     | WXRF   | 85GLA 01  | 400              | 50    |     | ITNA   | 82GRA 01  |
| 3.42             | 0.34  |     | ITNA   | 82GRA 01  | 409              | 15    |     | ITNA   | 81AHM 01  |
| 3.44             | 0.08  |     | TCGS   | 82GRA 01  | 430              | 70    |     | TCGS   | 82GRA 01  |
| 3.58             | 0.7   |     | TCGS   | 82VOG 01  | <u>Mo (ug/g)</u> |       |     |        |           |
| 4.23             | 0.13  |     | ITNA   | 81AHM 01  | 2                | 1     |     | ICPES  | 83CRO 01  |
| <u>La (ug/g)</u> |       |     |        |           | 3.73             | 0.52  |     | ITNA   | 82VOG 01  |
| 24               | 6     |     | WXRF   | 85GLA 01  | 3.73             | 0.52  |     | ITNA   | 82GRA 01  |
| 27.59            | 0.38  |     | ITNA   | 81AHM 01  | <u>Na (%)</u>    |       |     |        |           |
| 27.6             | 0.4   |     | ITNA   | 80AHM 01  | 2.6              | 0.2   |     | TCGS   | 82GRA 01  |
| 31               | 0.7   |     | ICPES  | 83CRO 01  | 3.3              | 0.4   |     | ITNA   | 82VOG 01  |
| 33               | 3     |     | ITNA   | 85GLA 01  | 3.44             | 0.02  |     | ICPES  | 83CRO 01  |
| 35.4             | 2.5   |     | ITNA   | 82GRA 01  | 3.46             | 0.26  |     | ITNA   | 82GRA 01  |
| 35.8             | 1.5   |     | ITNA   | 82VOG 01  | 3.49             | 0.01  |     | ITNA   | 85GAU 04  |
| 37.6             | 0.8   |     | ITNA   | 84ODD 01  | 3.51             | 0.05  |     | TCGS   | 85AND 01  |
| 37.8             | 0.8   |     | RTNA   | 84ODD 01  | 3.51             | 0.05  |     | TCGS   | 83AND 01  |
| <u>Li (ug/g)</u> |       |     |        |           | 3.56             | 0.02  |     | WXRF   | 85GLA 01  |
| 47               | 1     |     | ICPES  | 83CRO 01  | 3.56             | 0.03  |     | ITNA   | 85GLA 01  |
| <u>Lu (ng/g)</u> |       |     |        |           | 3.9              | 0.23  |     | ITNA   | 81AHM 01  |
| 710              | 10    |     | ICPES  | 83CRO 01  | <u>Nb (ug/g)</u> |       |     |        |           |
| 740              | 50    |     | ITNA   | 80AHM 01  | 12.7             | 0.9   |     | ICPES  | 83CRO 01  |
| 745              | 310   |     | ITNA   | 81AHM 01  | 18.4             | 1.5   |     | WXRF   | 84KYL 01  |
| 820              | 39    |     | ITNA   | 82VOG 01  | <u>Nd (ug/g)</u> |       |     |        |           |
| 836              | 50    |     | ITNA   | 82GRA 01  | 26               | 4     |     | ITNA   | 85GLA 01  |
| 934              | 2     |     | RTNA   | 84ODD 01  | 28.2             | 1     |     | ITNA   | 82GRA 01  |
| 947              | 2     |     | ITNA   | 84ODD 01  | 28.6             | 0.9   |     | ICPES  | 83CRO 01  |
| <u>Mg (ug/g)</u> |       |     |        |           | 29.5             | 0.3   |     | ITNA   | 84ODD 01  |
| < 2400           |       |     | ITNA   | 85GLA 01  | 30               | 5     |     | TCGS   | 83AND 01  |
| 1430             | 20    |     | ICPES  | 83CRO 01  | 30               | 5     |     | TCGS   | 85AND 01  |
| 1540             | 30    |     | WXRF   | 85GLA 01  | 33.5             | 0.02  |     | RTNA   | 84ODD 01  |
|                  |       |     |        |           | <u>Ni (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 4                | 2     |     | ICPES  | 83CRO 01  |
|                  |       |     |        |           | 19               | 50    |     | WXRF   | 85GLA 01  |

TABLE 278-2: INDIVIDUAL DATA FOR NBS SRM 278 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>P (ug/g)</u>  |       |     |        |           | <u>Sm (ug/g)</u> |       |     |        |           |
| 110              | 20    |     | WXRF   | 85GLA 01  | 5.45             | 0.03  |     | TCGS   | 83AND 01  |
| 170              | 10    |     | ICPES  | 83CRO 01  | 5.61             | 0.05  |     | TCGS   | 82VOG 01  |
| <u>Pb (ug/g)</u> |       |     |        |           | <u>Sr (ug/g)</u> |       |     |        |           |
| 16.22            | 0.037 |     | IDMS   | 86FIS 01  | 5.66             | 0.1   |     | TCGS   | 82GRA 01  |
| 18               | 3     |     | ICPES  | 83CRO 01  | 5.69             | 0.62  |     | ITNA   | 82GRA 01  |
| <u>Pr (ug/g)</u> |       |     |        |           | <u>Ta (ug/g)</u> |       |     |        |           |
| 7.48             | 0.08  |     | RTNA   | 84ODD 01  | 5.7              | 0.7   |     | ITNA   | 82VOG 01  |
| 8.6              | 0.8   |     | ICPES  | 83CRO 01  | 5.8              | 0.03  |     | RTNA   | 84ODD 01  |
| <u>Rb (ug/g)</u> |       |     |        |           | <u>Tb (ug/g)</u> |       |     |        |           |
| 128.4            | 1     |     | WXRF   | 84KYL 01  | 5.8              | 0.6   | 4   | TCGS   | 85GLA 05  |
| 129              | 7     |     | WXRF   | 85GLA 01  | 5.85             | 0.09  |     | ITNA   | 84ODD 01  |
| 130              | 5     |     | ITNA   | 85GLA 01  | 6                | 0.7   |     | ITNA   | 85GLA 01  |
| 130              | 12    |     | ITNA   | 82GRA 01  | 6.08             | 0.03  |     | TCGS   | 85AND 01  |
| 138              | 10    |     | ITNA   | 82VOG 01  | 6.2              | 0.6   | 4   | TCGS   | 85GLA 05  |
| 143.17           | 2.63  |     | ITNA   | 81AHM 01  | 6.8              | 0.6   |     | ICPES  | 83CRO 01  |
| <u>Sb (ug/g)</u> |       |     |        |           | <u>Th (ug/g)</u> |       |     |        |           |
| 1.59             | 0.05  |     | ITNA   | 82VOG 01  | 12.27            | 0.77  |     | ITNA   | 81AHM 01  |
| 1.61             | 0.13  |     | ITNA   | 82GRA 01  | 12.27            | 0.77  |     | ITNA   | 80CHA 02  |
| 1.7              | 0.4   |     | ITNA   | 81AHM 01  | 12.7             | 0.4   |     | ITNA   | 86GAU 01  |
| 1.8              | 0.1   |     | ITNA   | 85GLA 01  | 12.8             | 0.3   |     | ITNA   | 82GRA 01  |
| 1.9              |       |     | ITNA   | 84GLA 02  | 13               | 3     |     | ICPES  | 83CRO 01  |
| <u>Sc (ug/g)</u> |       |     |        |           | <u>U (ug/g)</u>  |       |     |        |           |
| 4.16             | 0.21  |     | ITNA   | 81AHM 01  | 13.1             | 0.2   |     | ITNA   | 82VOG 01  |
| 5                | 0.03  |     | ITNA   | 86GAU 01  | 13.2             | 0.4   |     | ITNA   | 85GLA 01  |
| 5                | 0.1   |     | ITNA   | 84GLA 02  |                  |       |     |        |           |
| 5.1              | 0.07  |     | ITNA   | 84GLA 11  |                  |       |     |        |           |
| 5.24             | 0.14  |     | ITNA   | 82GRA 01  |                  |       |     |        |           |
| 5.3              | 0.1   |     | ITNA   | 85GLA 01  |                  |       |     |        |           |
| 5.31             | 0.05  |     | ITNA   | 82VOG 01  |                  |       |     |        |           |
| 6                | 0.5   |     | ICPES  | 83CRO 01  |                  |       |     |        |           |
| <u>Si (%)</u>    |       |     |        |           | <u>V (ug/g)</u>  |       |     |        |           |
| 33.1             | 0.3   |     | TCGS   | 85AND 01  | 12.27            | 0.77  |     | ITNA   | 81AHM 01  |
| 33.1             | 0.3   |     | TCGS   | 83AND 01  | 12.27            | 0.77  |     | ITNA   | 80CHA 02  |
| 33.2             | 0.7   |     | TCGS   | 82VOG 01  | 12.7             | 0.4   |     | ITNA   | 86GAU 01  |
| 34.25            | 0.14  |     | WXRF   | 85GLA 01  | 12.8             | 0.3   |     | ITNA   | 82GRA 01  |
| 36.6             | 1.3   |     | TCGS   | 82GRA 01  | 13               | 3     |     | ICPES  | 83CRO 01  |

TABLE 278-2: INDIVIDUAL DATA FOR NBS SRM 278 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ti (ug/g)</u> |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 1330             | 60    |     | TCGS   | 85AND 01  | 47.8             | 0.4   |     | ICPES  | 83CRO 01  |
| 1330             | 60    |     | TCGS   | 83AND 01  | 54               | 2.5   |     | ITNA   | 82GRA 01  |
| 1420             | 30    |     | WXRF   | 85GLA 01  | 57               | 7     |     | WXRF   | 85GLA 01  |
| 1450             | 90    |     | TCGS   | 82GRA 01  | 57.4             | 3.6   |     | ITNA   | 82VOG 01  |
| 1480             | 10    |     | ICPES  | 83CRO 01  |                  |       |     |        |           |
| 1500             | 40    |     | TCGS   | 82VOG 01  | <u>Zr (ug/g)</u> |       |     |        |           |
| <u>Tm (ng/g)</u> |       |     |        |           | 285              | 16    |     | ITNA   | 82GRA 01  |
| 301              | 20    |     | ITNA   | 81AHM 01  | 288.8            | 2     |     | WXRF   | 84KYL 01  |
| 330              | 30    |     | RTNA   | 84ODD 01  | 290              | 2     |     | ICPES  | 83CRO 01  |
| 400              | 20    |     | ITNA   | 84ODD 01  | 302              | 9     |     | WXRF   | 85GLA 01  |
| 500              | 100   |     | ICPES  | 83CRO 01  | 311              | 50    |     | ITNA   | 82VOG 01  |
| <u>U (ug/g)</u>  |       |     |        |           |                  |       |     |        |           |
| 4.204            | 0.284 |     | ITNA   | 81AHM 01  |                  |       |     |        |           |
| 4.21             | 0.12  |     | FLUOR  | 86KAN 01  |                  |       |     |        |           |
| 4.51             | 0.005 |     | IDMS   | 86FIS 01  |                  |       |     |        |           |
| 4.51             | 0.05  |     | DNA    | 85GLA 04  |                  |       |     |        |           |
| 4.51             | 0.08  |     | DNA    | 85GLA 01  |                  |       |     |        |           |
| 4.51             | 0.08  |     | DNA    | 85GAU 04  |                  |       |     |        |           |
| 4.53             | 0.12  |     | DNA    | 86GAU 01  |                  |       |     |        |           |
| 4.58             |       |     | DNA    | 84GLA 02  |                  |       |     |        |           |
| 4.82             | 0.35  |     | ITNA   | 82GRA 01  |                  |       |     |        |           |
| 4.96             | 0.33  |     | ITNA   | 82VOG 01  |                  |       |     |        |           |
| <u>V (ug/g)</u>  |       |     |        |           |                  |       |     |        |           |
| 8                | 1     |     | ICPES  | 83CRO 01  |                  |       |     |        |           |
| 12               | 4     |     | ITNA   | 85GLA 01  |                  |       |     |        |           |
| 24               | 4     |     | WXRF   | 85GLA 01  |                  |       |     |        |           |
| <u>Y (ug/g)</u>  |       |     |        |           |                  |       |     |        |           |
| 38.3             | 4     |     | ICPES  | 83CRO 01  |                  |       |     |        |           |
| 41               | 2     |     | WXRF   | 85GLA 01  |                  |       |     |        |           |
| 44.5             | 1     |     | WXRF   | 84KYL 01  |                  |       |     |        |           |
| <u>Yb (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 3.58             | 0.25  |     | ITNA   | 80AHM 01  |                  |       |     |        |           |
| 3.58             | 0.25  |     | ITNA   | 81AHM 01  |                  |       |     |        |           |
| 4.54             | 0.86  |     | ITNA   | 82GRA 01  |                  |       |     |        |           |
| 4.68             | 0.05  |     | ICPES  | 83CRO 01  |                  |       |     |        |           |
| 4.79             | 0.04  |     | ITNA   | 84ODD 01  |                  |       |     |        |           |
| 4.8              | 0.2   |     | ITNA   | 85GLA 01  |                  |       |     |        |           |
| 5.04             | 0.08  |     | RTNA   | 84ODD 01  |                  |       |     |        |           |
| 5.09             | 0.95  |     | ITNA   | 82VOG 01  |                  |       |     |        |           |

TABLE 330-1: COMPILED DATA ON NBS SRM 330 COPPER ORE, MILL HEADS (revised 3/1/86)

| ELEMENT | UNITS | NBS        |
|---------|-------|------------|
| Ag      | ug/g  | 1.51       |
| Au      | ng/g  | 93         |
| Cu      | ug/g  | 8400 ± 100 |
| Mo      | ug/g  | 180 ± 10   |
| Re      | ng/g  | 300 ± 60   |

TABLE 331-1: COMPILED DATA ON NBS SRM 331 COPPER ORE, MILL TAILS (revised 3/1/86)

| ELEMENT | UNITS | NBS      |
|---------|-------|----------|
| Ag      | ng/g  | 243      |
| Au      | ng/g  | 34       |
| Cu      | ug/g  | 910 ± 10 |
| Mo      | ug/g  | 22 ± 2   |
| Re      | ng/g  | 40 ± 20  |

TABLE 332-1: COMPILED DATA ON NBS SRM 332 COPPER CONCENTRATE (revised 3/1/86)

| ELEMENT | UNITS | NBS        | CONSENSUS | METHOD |
|---------|-------|------------|-----------|--------|
| Ag      | ug/g  | 38.7       | ---       | ---    |
| Au      | ug/g  | 2.14       | ---       | ---    |
| Cu      | %     | 28.4 ± 0.1 | ---       | ---    |
| Mo      | ug/g  | 6400 ± 100 | ---       | ---    |
| Re      | ug/g  | 10.2 ± 0.2 | 10.2 (1)  | PROBE  |

TABLE 332-2: INDIVIDUAL DATA FOR NBS SRM 332 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|
| <u>Re (ug/g)</u> |       |     |        |           |
| 10.2             | 1.8   |     | PROBE  | 85HAS 01  |

TABLE 333-1: COMPILED DATA ON NBS SRM 333 MOLYBDENUM CONCENTRATE (revised 3/1/86)

| ELEMENT | UNITS | NBS          |
|---------|-------|--------------|
| Ag      | ug/g  | 25           |
| Au      | ug/g  | 8.9          |
| Cu      | %     | 1.038 ± 0.01 |
| Mo      | %     | 55.3 ± 0.1   |
| Re      | ug/g  | 870 ± 10     |

TABLE 610-1: COMPILED DATA FOR NBS SRM 610 TRACE ELEMENTS IN GLASS (revised 3/1/86)

| ELEMENT   | UNITS  | NBS         | CONSENSUS           | MEDIAN | RANGE           | METHOD MEANS    |            |
|-----------|--------|-------------|---------------------|--------|-----------------|-----------------|------------|
|           |        | Mean ± SD   | Mean ± SD (n)       |        |                 | Mean ± SD       | (n) Method |
| Ag        | ug/g   | 254 ± 10    | 180 (1)             | ---    | ---             | 180             | (1) NAA    |
| As        | ug/g   | ---         | 305 (1)             | ---    | ---             | 305             | (1) SSMS   |
| Au        | ug/g   | 25          | 20 (1)              | ---    | ---             | 20              | (1) NAA    |
| B         | ug/g   | 351         | 357 ± 9 (5)         | 358    | 348 - 368       | 356 ± 8         | (3) TCGS   |
| B         | ug/g   | ---         | ---                 | ---    | ---             | 358             | (2) ICPEs  |
| B-10      | atom % | ---         | 19.827 (1)          | ---    | ---             | 19.827          | (1) IDMS   |
| Ba        | ug/g   | ---         | 638 (1)             | ---    | ---             | 638             | (1) SSMS   |
| Be        | ug/g   | ---         | 450 (1)             | ---    | ---             | 450             | (1) CPAA   |
| Bi        | ug/g   | ---         | 405 (1)             | ---    | ---             | 405             | (1) SSMS   |
| Ca        | %      | 8.6         | 7.64 (1)            | ---    | ---             | 7.64            | (1) SSMS   |
| Cd        | ug/g   | ---         | 187 (1)             | ---    | ---             | 187             | (1) SSMS   |
| Ce        | ug/g   | ---         | 318 (1)             | ---    | ---             | 318             | (1) SSMS   |
| Co        | ug/g   | 390         | 389 ± 22 (9)        | 390    | 360 - 420       | 391 ± 23        | (8) PROBE  |
| Co        | ug/g   | ---         | ---                 | ---    | ---             | 375             | (1) SSMS   |
| Cr        | ug/g   | ---         | 410 ± 60 (9)        | 380    | 340 - 510       | 420 ± 60        | (8) PROBE  |
| Cr        | ug/g   | ---         | ---                 | ---    | ---             | 371             | (1) SSMS   |
| Cu        | ug/g   | 444 ± 4     | 380 ± 100 (8)       | 360    | 230 - 510       | 380 ± 100       | (8) PROBE  |
| Fe        | ug/g   | 458 ± 9     | 460 (1)             | ---    | ---             | 460             | (1) POL    |
| Ga        | ug/g   | ---         | 481 (1)             | ---    | ---             | 481             | (1) SSMS   |
| Ge        | ug/g   | ---         | 496 (1)             | ---    | ---             | 496             | (1) SSMS   |
| Hf        | ug/g   | ---         | 220 (1)             | ---    | ---             | 220             | (1) SSMS   |
| In        | ug/g   | ---         | 319 (1)             | ---    | ---             | 319             | (1) SSMS   |
| K         | ug/g   | 461         | ---                 | ---    | ---             | ---             | ---        |
| Li        | ug/g   | ---         | 354 (1)             | ---    | ---             | 354             | (1) CPAA   |
| Mg        | ug/g   | ---         | 472 (1)             | ---    | ---             | 472             | (1) SSMS   |
| Mn        | ug/g   | 485 ± 10    | 480 ± 50 (9)        | 490    | 391 - 550       | 495 ± 40        | (8) PROBE  |
| Mn        | ug/g   | ---         | ---                 | ---    | ---             | 391             | (1) SSMS   |
| Mo        | ug/g   | ---         | 307 (1)             | ---    | ---             | 307             | (1) SSMS   |
| Ni        | ug/g   | 458.7 ± 4   | 480 ± 50 (8)        | 470    | 431 - 550       | 490 ± 50        | (6) PROBE  |
| Ni        | ug/g   | ---         | ---                 | ---    | ---             | 450             | (1) POL    |
| Ni        | ug/g   | ---         | ---                 | ---    | ---             | 431             | (1) SSMS   |
| Pb        | ug/g   | 426 ± 1     | 418 ± 17 (4)        | 425.58 | 392 - 427       | 426.2 ± 0.7     | (3) IDMS   |
| Pb        | ug/g   | ---         | ---                 | ---    | ---             | 392             | (1) SSMS   |
| Rb        | ug/g   | 425.7 ± 0.8 | 425.7 (1)           | ---    | ---             | 425.7           | (1) IDMS   |
| Sb        | ug/g   | ---         | 387 (1)             | ---    | ---             | 387             | (1) SSMS   |
| Sr        | ug/g   | 515.5 ± 0.5 | 515.5 (1)           | ---    | ---             | 515.5           | (1) IDMS   |
| Ta        | ug/g   | ---         | 206 (1)             | ---    | ---             | 206             | (1) SSMS   |
| Te        | ug/g   | ---         | 259 (1)             | ---    | ---             | 259             | (1) SSMS   |
| Th        | ug/g   | 457.2 ± 1.2 | 460 ± 7 (3)         | 457.23 | 455.4 - 469     | 456.3           | (2) IDMS   |
| Th        | ug/g   | ---         | ---                 | ---    | ---             | 469             | (1) SSMS   |
| Ti        | ug/g   | 437         | 490 ± 70 (10)       | 530    | 361 - 560       | 520 ± 50        | (8) PROBE  |
| Ti        | ug/g   | ---         | ---                 | ---    | ---             | 434             | (1) POL    |
| Ti        | ug/g   | ---         | ---                 | ---    | ---             | 361             | (1) SSMS   |
| Tl        | ug/g   | 61.8 ± 2.5  | 57 (2)              | ---    | 52 - 61.8       | 52              | (1) SSMS   |
| Tl        | ug/g   | ---         | ---                 | ---    | ---             | 61.8            | (1) IDMS   |
| U         | ug/g   | 461.5 ± 1.1 | 453 ± 22 (7)        | 461.5  | 413 - 471       | 457 ± 23        | (3) NAA    |
| U         | ug/g   | ---         | ---                 | ---    | ---             | 461.4           | (2) IDMS   |
| U         | ug/g   | ---         | ---                 | ---    | ---             | 413             | (1) SSMS   |
| U         | ug/g   | ---         | ---                 | ---    | ---             | 462.8           | (1) NT     |
| U-234     | atom % | ---         | 0.0010 (1)          | ---    | ---             | 0.0010          | (1) IDMS   |
| U-235     | atom % | 0.2376      | 0.2376 (2)          | ---    | 0.2376 - 0.2376 | 0.2376          | (2) IDMS   |
| U-235/238 | ratio  | 0.0024      | 0.0025 ± 0.0001 (4) | 0.0024 | 0.0023 - 0.0026 | 0.0025 ± 0.0001 | (4) NAA    |
| U-236     | atom % | ---         | 0.0043 (1)          | ---    | ---             | 0.0043          | (1) IDMS   |
| U-238     | atom % | ---         | 99.7571 (1)         | ---    | ---             | 99.7571         | (1) IDMS   |
| V         | ug/g   | ---         | 490 ± 60 (8)        | 460    | 410 - 560       | 490 ± 60        | (8) PROBE  |
| Zn        | ug/g   | 433         | 500 ± 140 (6)       | 500    | 320 - 650       | 500 ± 140       | (6) PROBE  |

TABLE 610-2: INDIVIDUAL DATA FOR NBS SRM 610 (revised 3/1/86)

| Conc                 | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|----------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ug/g)</u>     |       |     |        |           | <u>Co (ug/g)</u> |       |     |        |           |
| 180                  | 80    |     | ITNA   | 73SHE 01  | 135              | 14    |     | ITNA   | 73SHE 01  |
|                      |       |     |        |           | 360              | 60    | 6   | PROBE  | 71HEI 02  |
| <u>As (ug/g)</u>     |       |     |        |           | 360              | 90    | 6   | PROBE  | 71HEI 02  |
| 305                  | 20    |     | SSMS   | 74BER 01  | 375              | 12    |     | SSMS   | 74BER 01  |
| <u>Au (ug/g)</u>     |       |     |        |           | 390              | 90    | 6   | PROBE  | 71HEI 02  |
| 20                   | 2     |     | ITNA   | 73SHE 01  | 390              | 100   | 6   | PROBE  | 71HEI 02  |
|                      |       |     |        |           | 390              | 110   | 6   | PROBE  | 71HEI 02  |
| <u>B (ug/g)</u>      |       |     |        |           | 400              | 130   | 6   | PROBE  | 71HEI 02  |
| 348                  | 13.6  |     | ICPES  | 85ZAC 01  | 420              | 140   | 6   | PROBE  | 71HEI 02  |
| 348                  | 20    | 6   | TCGS   | 76GLA 01  | 420              | 180   | 6   | PROBE  | 71HEI 02  |
| 358                  | 15    | 6   | TCGS   | 76GLA 01  | <u>Cr (ug/g)</u> |       |     |        |           |
| 363                  | 17    | 6   | TCGS   | 76GLA 01  | 340              | 40    | 6   | PROBE  | 71HEI 02  |
| 368                  | 12    |     | ICPES  | 82OWE 01  | 360              | 40    | 6   | PROBE  | 71HEI 02  |
| <u>B-10 (atom %)</u> |       |     |        |           | 370              | 100   | 6   | PROBE  | 71HEI 02  |
| 19.827               |       |     | IDMS   | 72CAR 01  | 371              | 15    |     | SSMS   | 74BER 01  |
|                      |       |     |        |           | 380              | 140   | 6   | PROBE  | 71HEI 02  |
| <u>Ba (ug/g)</u>     |       |     |        |           | 440              | 40    | 6   | PROBE  | 71HEI 02  |
| 638                  | 24    |     | SSMS   | 74BER 01  | 440              | 90    | 6   | PROBE  | 71HEI 02  |
|                      |       |     |        |           | 500              | 120   | 6   | PROBE  | 71HEI 02  |
| <u>Be (ug/g)</u>     |       |     |        |           | 510              | 60    | 6   | PROBE  | 71HEI 02  |
| 450                  | 50    |     | CPAA   | 82LAS 01  | <u>Cu (ug/g)</u> |       |     |        |           |
|                      |       |     |        |           | 230              | 210   | 6   | PROBE  | 71HEI 02  |
| <u>Bi (ug/g)</u>     |       |     |        |           | 270              | 150   | 6   | PROBE  | 71HEI 02  |
| 405                  | 18    |     | SSMS   | 74BER 01  | 350              | 200   | 6   | PROBE  | 71HEI 02  |
|                      |       |     |        |           | 360              | 130   | 6   | PROBE  | 71HEI 02  |
| <u>Ca (%)</u>        |       |     |        |           | 420              | 200   | 6   | PROBE  | 71HEI 02  |
| 7.64                 | 0.002 |     | SSMS   | 74BER 01  | 440              | 250   | 6   | PROBE  | 71HEI 02  |
|                      |       |     |        |           | 500              | 100   | 6   | PROBE  | 71HEI 02  |
| <u>Cd (ug/g)</u>     |       |     |        |           | 510              | 110   | 6   | PROBE  | 71HEI 02  |
| 187                  | 21    |     | SSMS   | 74BER 01  | <u>Fe (ug/g)</u> |       |     |        |           |
|                      |       |     |        |           | 460              | 10    |     | POL    | 73MAI 01  |
| <u>Ce (ug/g)</u>     |       |     |        |           | <u>Ga (ug/g)</u> |       |     |        |           |
| 318                  | 14    |     | SSMS   | 74BER 01  | 481              | 10    |     | SSMS   | 74BER 01  |
|                      |       |     |        |           | <u>Ge (ug/g)</u> |       |     |        |           |
| <u>Hf (ug/g)</u>     |       |     |        |           | 496              | 10    |     | SSMS   | 74BER 01  |
|                      |       |     |        |           | <u>Hf (ug/g)</u> |       |     |        |           |
|                      |       |     |        |           | 220              | 14    |     | SSMS   | 74BER 01  |

TABLE 610-2: INDIVIDUAL DATA FOR NBS SRM 610 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |        |      |    |      |          |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|--------|------|----|------|----------|
| <u>In (ug/g)</u> |       |     |        |           | <u>Sb (ug/g)</u> |       |     |        |           |        |      |    |      |          |
| 319              | 11    |     | SSMS   | 74BER 01  | 387              | 18    |     | SSMS   | 74BER 01  |        |      |    |      |          |
| <u>Li (ug/g)</u> |       |     |        |           | <u>Sr (ug/g)</u> |       |     |        |           |        |      |    |      |          |
| 354              | 27    |     | CPAA   | 82LAS 01  | 515.5            | 0.3   |     | IDMS   | 73MOO 01  |        |      |    |      |          |
| <u>Mg (ug/g)</u> |       |     |        |           | <u>Ta (ug/g)</u> |       |     |        |           |        |      |    |      |          |
| 472              | 22    |     | SSMS   | 74BER 01  | 206              | 9     |     | SSMS   | 74BER 01  |        |      |    |      |          |
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Te (ug/g)</u> |       |     |        |           |        |      |    |      |          |
| 391              | 7     |     | SSMS   | 74BER 01  | 259              | 21    |     | SSMS   | 74BER 01  |        |      |    |      |          |
| 440              | 90    | 6   | PROBE  | 71HEI 02  | <u>Th (ug/g)</u> |       |     |        |           |        |      |    |      |          |
| 450              | 90    | 6   | PROBE  | 71HEI 02  |                  |       |     |        |           |        |      |    |      |          |
| 480              | 100   | 6   | PROBE  | 71HEI 02  |                  |       |     |        |           |        |      |    |      |          |
| 490              | 40    | 6   | PROBE  | 71HEI 02  |                  |       |     |        |           |        |      |    |      |          |
| 490              | 70    | 6   | PROBE  | 71HEI 02  |                  |       |     |        |           |        |      |    |      |          |
| 530              | 70    | 6   | PROBE  | 71HEI 02  |                  |       |     |        |           |        |      |    |      |          |
| 530              | 80    | 6   | PROBE  | 71HEI 02  |                  |       |     |        |           |        |      |    |      |          |
| 550              | 100   | 6   | PROBE  | 71HEI 02  |                  |       |     |        |           |        |      |    |      |          |
| <u>Mo (ug/g)</u> |       |     |        |           |                  |       |     |        |           | 455.4  | 1.6  | 17 | IDMS | 73BAR 01 |
| 307              | 19    |     | SSMS   | 74BER 01  |                  |       |     |        |           | 457.23 | 0.52 | 17 | IDMS | 73BAR 01 |
| <u>Ni (ug/g)</u> |       |     |        |           | 469              | 7     |     | SSMS   | 74BER 01  |        |      |    |      |          |
| 431              | 10    |     | SSMS   | 74BER 01  | <u>Ti (ug/g)</u> |       |     |        |           |        |      |    |      |          |
| 440              | 50    | 6   | PROBE  | 71HEI 02  | 361              | 18    |     | SSMS   | 74BER 01  |        |      |    |      |          |
| 450              | 7     |     | POL    | 73MAI 01  | 430              | 50    | 6   | PROBE  | 71HEI 02  |        |      |    |      |          |
| 450              | 50    | 6   | PROBE  | 71HEI 02  | 434              | 10    |     | POL    | 73MAI 01  |        |      |    |      |          |
| 470              | 70    | 6   | PROBE  | 71HEI 02  | 440              | 30    | 6   | PROBE  | 71HEI 02  |        |      |    |      |          |
| 480              | 80    | 6   | PROBE  | 71HEI 02  | 530              | 80    | 6   | PROBE  | 71HEI 02  |        |      |    |      |          |
| 550              | 140   | 6   | PROBE  | 71HEI 02  | 540              | 70    | 6   | PROBE  | 71HEI 02  |        |      |    |      |          |
| 550              | 180   | 6   | PROBE  | 71HEI 02  | 540              | 80    | 6   | PROBE  | 71HEI 02  |        |      |    |      |          |
| 940              | 420   | 6   | PROBE  | 71HEI 02  | 550              | 70    | 6   | PROBE  | 71HEI 02  |        |      |    |      |          |
| 950              | 220   | 6   | PROBE  | 71HEI 02  | 550              | 100   | 6   | PROBE  | 71HEI 02  |        |      |    |      |          |
| <u>Pb (ug/g)</u> |       |     |        |           | 560              | 110   | 6   | PROBE  | 71HEI 02  |        |      |    |      |          |
| 392              | 11    |     | SSMS   | 74BER 01  | <u>Tl (ug/g)</u> |       |     |        |           |        |      |    |      |          |
| 425.58           | 0.4   | 17  | IDMS   | 73BAR 01  | 52               | 35    |     | SSMS   | 74BER 01  |        |      |    |      |          |
| 426.15           | 0.41  | 17  | IDMS   | 73BAR 01  | 61.8             | 1     |     | IDMS   | 73BAR 01  |        |      |    |      |          |
| 427              | 1     |     | IDMS   | 83BRO 01  | <u>U (ug/g)</u>  |       |     |        |           |        |      |    |      |          |
| <u>Rb (ug/g)</u> |       |     |        |           | 413              | 18    |     | SSMS   | 74BER 01  |        |      |    |      |          |
| 425.7            | 0.7   |     | IDMS   | 73MOO 01  | 430              |       |     | DNA    | 84GLA 02  |        |      |    |      |          |
|                  |       |     |        |           | 461.3            | 1     | 17  | IDMS   | 73BAR 01  |        |      |    |      |          |
|                  |       |     |        |           | 461.3            | 1.7   | D   | IDMS   | 72CAR 01  |        |      |    |      |          |
|                  |       |     |        |           | 461.5            | 0.4   | 17  | IDMS   | 73BAR 01  |        |      |    |      |          |
|                  |       |     |        |           | 461.5            | 1.1   | D   | IDMS   | 72CAR 01  |        |      |    |      |          |
|                  |       |     |        |           | 462.8            | 13.8  |     | NT     | 72CAR 01  |        |      |    |      |          |
|                  |       |     |        |           | 470              | 90    | 17  | DNA    | 82CON 01  |        |      |    |      |          |
|                  |       |     |        |           | 471              | 28    | 17  | DNA    | 82CON 01  |        |      |    |      |          |

TABLE 610-2: INDIVIDUAL DATA FOR NBS SRM 610 (cont.)

| Conc                     | Uncer  | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|--------------------------|--------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>U-234 (atom %)</u>    |        |     |        |           | <u>V (ug/g)</u>  |       |     |        |           |
| 0.001                    |        |     | IDMS   | 73BAR 01  | 206              | 10    |     | SSMS   | 74BER 01  |
|                          |        |     |        |           | 410              | 70    | 6   | PROBE  | 71HEI 02  |
| <u>U-235 (atom %)</u>    |        |     |        |           | 430              | 70    | 6   | PROBE  | 71HEI 02  |
| 0.2376                   |        |     | IDMS   | 73BAR 01  | 450              | 100   | 6   | PROBE  | 71HEI 02  |
| 0.2376                   | 0.0004 |     | IDMS   | 72CAR 01  | 460              | 40    | 6   | PROBE  | 71HEI 02  |
| <u>U-235/238 (ratio)</u> |        |     |        |           | 500              | 80    | 6   | PROBE  | 71HEI 02  |
| 0.0023                   |        |     | RTNA   | 86GAU 01  | 530              | 70    | 6   | PROBE  | 71HEI 02  |
| 0.0024                   | 0.0001 |     | RTNA   | 85GAU 04  | 550              | 70    | 6   | PROBE  | 71HEI 02  |
| 0.0025                   | 0.0001 |     | RTNA   | 84GLA 02  | 560              | 110   | 6   | PROBE  | 71HEI 02  |
| 0.0026                   | 0.0001 |     | RTNA   | 84GLA 11  | <u>Zn (ug/g)</u> |       |     |        |           |
| <u>U-236 (atom %)</u>    |        |     |        |           | 320              | 130   | 6   | PROBE  | 71HEI 02  |
| 0.0043                   |        |     | IDMS   | 73BAR 01  | 320              | 150   | 6   | PROBE  | 71HEI 02  |
| <u>U-238 (atom %)</u>    |        |     |        |           | 500              | 140   | 6   | PROBE  | 71HEI 02  |
| 99.7571                  |        |     | IDMS   | 73BAR 01  | 590              | 170   | 6   | PROBE  | 71HEI 02  |
|                          |        |     |        |           | 600              | 190   | 6   | PROBE  | 71HEI 02  |
|                          |        |     |        |           | 650              | 140   | 6   | PROBE  | 71HEI 02  |

TABLE 612-1: COMPILED DATA FOR NBS SRM 612 TRACE ELEMENTS IN GLASS (revised 3/1/86)

| ELEMENT   | UNITS  | NBS              | CONSENSUS        |     | MEDIAN | RANGE         | NAA             |     | OTHER METHODS  |            |
|-----------|--------|------------------|------------------|-----|--------|---------------|-----------------|-----|----------------|------------|
|           |        | Mean $\pm$ SD    | Mean $\pm$ SD    | (n) |        |               | Mean $\pm$ SD   | (n) | Mean $\pm$ SD  | (n) Method |
| Ag        | ug/g   | 22 $\pm$ 0.3     | 26               | (2) | ---    | 20 - 31       | 31              | (1) | 20             | (1) AA     |
| Al        | %      | 1.1              | 1.11             | (1) | ---    | ---           | 1.11            | (1) | ---            | ---        |
| As        | ug/g   | ---              | 47               | (2) | ---    | 35.6 - 58.1   | 58.1            | (1) | 35.6           | (1) PAA    |
| Au        | ug/g   | 5                | 5.09 $\pm$ 0.16  | (3) | 5      | 5 - 5.27      | 5.09 $\pm$ 0.16 | (3) | ---            | ---        |
| B         | ug/g   | 32               | 33 $\pm$ 5       | (4) | 31     | 27.8 - 40     | ---             | --- | 33.9           | (2) ICPES  |
| B         | ug/g   | ---              | ---              | --- | ---    | ---           | ---             | --- | 31             | (1) TCGS   |
| B         | ug/g   | ---              | ---              | --- | ---    | ---           | ---             | --- | 32.39          | (1) NT     |
| B-10      | atom % | ---              | 19.827           | (1) | ---    | ---           | ---             | --- | 19.827         | (1) IDMS   |
| Ba        | ug/g   | 41               | 36.5             | (1) | ---    | ---           | 36.5            | (1) | ---            | ---        |
| Be        | ug/g   | ---              | 31               | (1) | ---    | ---           | ---             | --- | 31             | (1) CPAA   |
| Br        | ug/g   | ---              | < 1.4            | --- | ---    | ---           | < 1.4           | --- | ---            | ---        |
| Ca        | %      | 8.6              | 8.72             | (2) | ---    | 8.65 - 8.79   | 8.79            | (1) | 8.65           | (1) PAA    |
| Ce        | ug/g   | 39               | 41 $\pm$ 3       | (4) | 40.6   | 37 - 45.3     | 41.15           | (2) | 40.6           | (1) PAA    |
| Co        | ug/g   | 35.5 $\pm$ 1.2   | 35 $\pm$ 3       | (5) | 34.3   | 31 - 37.47    | 35 $\pm$ 3      | (4) | 33.3           | (1) PAA    |
| Cr        | ug/g   | ---              | 110              | (2) | ---    | 65.9 - 155    | 110             | (2) | ---            | ---        |
| Cs        | ug/g   | ---              | 43 $\pm$ 2       | (3) | 43     | 41.1 - 44.8   | 42.0            | (2) | 44.8           | (1) PAA    |
| Cu        | ug/g   | 37.7 $\pm$ 0.9   | 37               | (1) | ---    | ---           | 37              | (1) | ---            | ---        |
| Dy        | ug/g   | 35               | 37               | (1) | ---    | ---           | 37              | (1) | ---            | ---        |
| Er        | ug/g   | 39               | ---              | --- | ---    | ---           | ---             | --- | ---            | ---        |
| Eu        | ug/g   | 36               | 31 $\pm$ 5       | (3) | 32.86  | 26 - 35.3     | 31 $\pm$ 5      | (3) | ---            | ---        |
| Fe        | ug/g   | 51 $\pm$ 2       | 56               | (2) | ---    | 51.3 - 60     | 60              | (1) | 51.3           | (1) POL    |
| Gd        | ug/g   | 39               | 37               | (2) | ---    | 36 - 38       | ---             | --- | 37             | (2) TCGS   |
| Hf        | ug/g   | ---              | 42               | (2) | ---    | 32.2 - 52.29  | 42.2            | (2) | ---            | ---        |
| K         | ug/g   | 64               | ---              | --- | ---    | ---           | ---             | --- | ---            | ---        |
| La        | ug/g   | 36               | 38               | (2) | ---    | 35 - 40.2     | 37.6            | (2) | ---            | ---        |
| Li        | ug/g   | ---              | 44               | (1) | ---    | ---           | ---             | --- | 44             | (1) CPAA   |
| Lu        | ug/g   | ---              | 36.8             | (1) | ---    | ---           | 36.8            | (1) | ---            | ---        |
| Mg        | ug/g   | ---              | 341              | (1) | ---    | ---           | ---             | --- | 341            | (1) PAA    |
| Mn        | ug/g   | 39.6 $\pm$ 0.8   | 38.6             | (2) | ---    | 38.2 - 39     | 38.2            | (1) | 39             | (1) PAA    |
| Na        | %      | 10.4             | 10.6             | (2) | ---    | 10.5 - 10.68  | 10.68           | (1) | 10.5           | (1) PAA    |
| Nb        | ug/g   | ---              | 38.1             | (1) | ---    | ---           | ---             | --- | 38.1           | (1) PAA    |
| Nd        | ug/g   | 36               | ---              | --- | ---    | ---           | ---             | --- | ---            | ---        |
| Ni        | ug/g   | 38.8 $\pm$ 0.2   | 40.1             | (1) | ---    | ---           | ---             | --- | 40.1           | (1) PAA    |
| Pb        | ug/g   | 38.57 $\pm$ 0.2  | 38.58 $\pm$ 0.16 | (5) | 38.56  | 38.37 - 38.83 | ---             | --- | 38.6 $\pm$ 0.2 | (5) IDMS   |
| Pb        | ug/g   | ---              | ---              | --- | ---    | ---           | ---             | --- | 36.3           | (1) AA     |
| Rb        | ug/g   | 31.4 $\pm$ 0.4   | 32 $\pm$ 2       | (5) | 31.7   | 31.41 - 36    | 36              | (1) | 32             | (1) PAA    |
| Rb        | ug/g   | ---              | ---              | --- | ---    | ---           | ---             | --- | 31.425         | (2) IDMS   |
| Sb        | ug/g   | ---              | 39 $\pm$ 6       | (3) | 39.4   | 32.2 - 45.2   | 38.7            | (2) | 39.4           | (1) PAA    |
| Sc        | ug/g   | ---              | 38 $\pm$ 3       | (3) | 38.2   | 34 - 40.35    | 37.2            | (2) | 38.2           | (1) PAA    |
| Si        | %      | 33.6             | 34.04            | (1) | ---    | ---           | 34.04           | (1) | ---            | ---        |
| Sm        | ug/g   | 39               | 35 $\pm$ 4       | (3) | 32.8   | 32.7 - 39.6   | 39.6            | (1) | 32.75          | (2) TCGS   |
| Sr        | ug/g   | 78.4 $\pm$ 0.2   | 77.6 $\pm$ 1.0   | (4) | 77.3   | 76.3 - 78.38  | ---             | --- | 77.3           | (1) PAA    |
| Sr        | ug/g   | ---              | ---              | --- | ---    | ---           | ---             | --- | 78.345         | (2) IDMS   |
| Sr-87/86  | ratio  | ---              | 0.70907          | (1) | ---    | ---           | ---             | --- | 0.70907        | (1) IDMS   |
| Ta        | ug/g   | ---              | 44               | (2) | ---    | 36.33 - 52.7  | 44.5            | (2) | ---            | ---        |
| Tb        | ug/g   | ---              | 37               | (2) | ---    | 22 - 52.96    | 37.5            | (2) | ---            | ---        |
| Th        | ug/g   | 37.79 $\pm$ 0.08 | 36 $\pm$ 3       | (5) | 37.55  | 31 - 38.43    | 35 $\pm$ 4      | (3) | 37.67          | (2) IDMS   |
| Ti        | ug/g   | 50.1 $\pm$ 0.8   | 53               | (2) | ---    | 50 - 55.2     | ---             | --- | 55.2           | (1) PAA    |
| Ti        | ug/g   | ---              | ---              | --- | ---    | ---           | ---             | --- | 50             | (1) POL    |
| Tl        | ug/g   | 15.7 $\pm$ 0.3   | 15.7             | (1) | ---    | ---           | ---             | --- | 15.68          | (1) IDMS   |
| U         | ug/g   | 37.38 $\pm$ 0.08 | 37.5 $\pm$ 1.3   | (9) | 37.37  | 35.74 - 40    | 40 $\pm$ 3      | (4) | 37.4 $\pm$ 0.1 | (4) IDMS   |
| U         | ug/g   | ---              | ---              | --- | ---    | ---           | ---             | --- | 36.32          | (2) NT     |
| U-235     | atom % | 0.2392           | 0.2392           | (1) | ---    | ---           | ---             | --- | 0.2392         | (1) IDMS   |
| U-235/238 | ratio  | ---              | 0.0023           | (1) | ---    | ---           | 0.00229         | (1) | ---            | ---        |
| V         | ug/g   | ---              | 58.6             | (1) | ---    | ---           | 58.6            | (1) | ---            | ---        |
| Y         | ug/g   | ---              | 37.9             | (1) | ---    | ---           | ---             | --- | 37.9           | (1) PAA    |
| Yb        | ug/g   | 42               | 48               | (2) | ---    | 40 - 55       | 47.5            | (2) | ---            | ---        |
| Zr        | ug/g   | ---              | 41.8             | (1) | ---    | ---           | ---             | --- | 41.8           | (1) PAA    |

TABLE 612-2: INDIVIDUAL DATA FOR NBS SRM 612 (revised 3/1/86)

| Conc                 | Uncer  | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|----------------------|--------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ug/g)</u>     |        |     |        |           | <u>Co (ug/g)</u> |       |     |        |           |
| 20                   | 1      |     | FAA    | 84HEA 01  | 31               | 1     |     | ITNA   | 73SHE 01  |
| 31                   | 7      |     | ITNA   | 73SHE 01  | 33.3             | 1     |     | PAA    | 80KAN 01  |
|                      |        |     |        |           | 34.3             | 2.9   |     | ITNA   | 84KUL 01  |
| <u>Al (%)</u>        |        |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| 1.1109               | 0.0212 |     | ITNA   | 85PEN 01  | 37.1             | 2.3   | 6   | ITNA   | 73KIM 01  |
|                      |        |     |        |           | 37.47            | 4.1   | 6   | ITNA   | 73KIM 01  |
| <u>As (ug/g)</u>     |        |     |        |           | <u>Cs (ug/g)</u> |       |     |        |           |
| 35.6                 | 0.3    |     | PAA    | 80KAN 01  | 65.9             | 3.7   |     | ITNA   | 84KUL 01  |
| 58.1                 | 7.3    |     | ITNA   | 84KUL 01  | 155              | 8     |     | ITNA   | 73KIM 01  |
| <u>Au (ug/g)</u>     |        |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| 5                    | 0.2    |     | ITNA   | 84KUL 01  | 41.1             | 6.6   |     | ITNA   | 73KIM 01  |
| 5                    | 1      |     | ITNA   | 73SHE 01  | 43               | 2     |     | ITNA   | 84KUL 01  |
| 5.27                 | 0.11   |     | ITNA   | 73KIM 01  | 44.8             | 1.2   |     | PAA    | 80KAN 01  |
| <u>B (ug/g)</u>      |        |     |        |           | <u>Dy (ug/g)</u> |       |     |        |           |
| 27.8                 | 2.9    |     | ICPES  | 85ZAC 01  | 37               | 4     |     | ITNA   | 84KUL 01  |
| 31                   | 3      |     | TCGS   | 84GLA 01  | <u>Eu (ug/g)</u> |       |     |        |           |
| 32.39                | 1.04   |     | NT     | 72CAR 01  | 26               | 1     |     | ITNA   | 73SHE 01  |
| 40                   | 4      |     | ICPES  | 82OWE 01  | 32.86            | 2.19  |     | ITNA   | 73KIM 01  |
| <u>B-10 (atom %)</u> |        |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| 19.827               |        |     | IDMS   | 72CAR 01  | 35.3             | 1.2   |     | ITNA   | 84KUL 01  |
| <u>Ba (ug/g)</u>     |        |     |        |           | <u>Gd (ug/g)</u> |       |     |        |           |
| 36.5                 | 5.2    |     | ITNA   | 84KUL 01  | 36               | 4     | 4   | TCGS   | 85GLA 05  |
| <u>Be (ug/g)</u>     |        |     |        |           | <u>Hf (ug/g)</u> |       |     |        |           |
| 31                   | 7      |     | CPAA   | 82LAS 01  | 51.3             | 0.8   |     | POL    | 73MAI 01  |
| <u>Br (ug/g)</u>     |        |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| <                    | 1.4    |     | ITNA   | 84KUL 01  | 60               | 7     |     | ITNA   | 84KUL 01  |
| <u>Ca (%)</u>        |        |     |        |           | <u>Gd (ug/g)</u> |       |     |        |           |
| 8.65                 | 0.14   |     | PAA    | 80KAN 01  | 36               | 4     | 4   | TCGS   | 85GLA 05  |
| 8.79                 | 0.72   |     | ITNA   | 84KUL 01  | 38               | 4     | 4   | TCGS   | 85GLA 05  |
| <u>Ce (ug/g)</u>     |        |     |        |           | <u>Hf (ug/g)</u> |       |     |        |           |
| 37                   | 2      |     | ITNA   | 73SHE 01  | 32.2             | 1.6   |     | ITNA   | 84KUL 01  |
| 40.6                 | 0.2    |     | PAA    | 80KAN 01  | 52.29            | 3.11  |     | ITNA   | 73KIM 01  |
| 41.2                 |        |     | UU     | 77HAN 02  | <u>La (ug/g)</u> |       |     |        |           |
| 45.3                 | 1.5    |     | ITNA   | 84KUL 01  | 35               | 15    |     | ITNA   | 73SHE 01  |
|                      |        |     |        |           | 40.2             | 1.2   |     | ITNA   | 84KUL 01  |

TABLE 612-2: INDIVIDUAL DATA FOR NBS SRM 612 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                    | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|-------------------------|-------|-----|--------|-----------|
| <u>Li (ug/g)</u> |       |     |        |           | <u>Sc (ug/g)</u>        |       |     |        |           |
| 44               | 8     |     | CPAA   | 82LAS 01  | 34                      | 3     |     | ITNA   | 84KUL 01  |
|                  |       |     |        |           | 38.2                    | 1.2   |     | PAA    | 80KAN 01  |
| <u>Lu (ug/g)</u> |       |     |        |           |                         |       |     |        |           |
| 36.8             | 0.2   |     | ITNA   | 84KUL 01  | 40.35                   | 0.35  |     | ITNA   | 73KIM 01  |
| <u>Mg (ug/g)</u> |       |     |        |           | <u>Si (%)</u>           |       |     |        |           |
|                  |       |     |        |           | 34.04                   | 0.65  |     | ITNA   | 85PEN 01  |
| < 2412           |       |     | ITNA   | 85PEN 01  | <u>Sm (ug/g)</u>        |       |     |        |           |
| 341              | 16    |     | PAA    | 80KAN 01  | 32.7                    | 3     | 4   | TCGS   | 85GLA 05  |
| <u>Mn (ug/g)</u> |       |     |        |           | 32.8                    | 3     | 4   | TCGS   | 85GLA 05  |
| 38.2             | 1.1   |     | ITNA   | 84KUL 01  | 39.6                    | 1.1   |     | ITNA   | 84KUL 01  |
| 39               | 2.6   |     | PAA    | 80KAN 01  | <u>Sr (ug/g)</u>        |       |     |        |           |
| <u>Na (%)</u>    |       |     |        |           | 76.3                    |       |     | UU     | 77HAN 02  |
| 10.5             | 0.15  |     | PAA    | 80KAN 01  | 77.3                    | 1.3   |     | PAA    | 80KAN 01  |
| 10.68            | 0.59  |     | ITNA   | 84KUL 01  | 78.31                   | 0.09  |     | IDMS   | 83LIP 01  |
| <u>Nb (ug/g)</u> |       |     |        |           | 78.38                   | 0.25  |     | IDMS   | 73MOO 01  |
| 38.1             | 1     |     | PAA    | 80KAN 01  | <u>Sr-87/86 (ratio)</u> |       |     |        |           |
| <u>Ni (ug/g)</u> |       |     |        |           | 709.07                  | 0.1   | 28  | IDMS   | 83LIP 01  |
| 40.1             | 1.1   |     | PAA    | 80KAN 01  | <u>Ta (ug/g)</u>        |       |     |        |           |
| <u>Pb (ug/g)</u> |       |     |        |           | 36.33                   | 5.6   |     | ITNA   | 73KIM 01  |
| 36.3             | 1.5   |     | FAA    | 84HEA 01  | 52.7                    | 0.3   |     | ITNA   | 84KUL 01  |
| 38.37            | 0.13  |     | IDMS   | 86FIS 01  | <u>Tb (ug/g)</u>        |       |     |        |           |
| 38.56            | 0.07  | 17  | IDMS   | 73BAR 01  | 22                      | 2     |     | ITNA   | 84KUL 01  |
| 38.56            | 0.11  |     | IDMS   | 77GUL 01  | 52.96                   | 5.62  |     | ITNA   | 73KIM 01  |
| 38.57            | 0.09  | 17  | IDMS   | 73BAR 01  | <u>Th (ug/g)</u>        |       |     |        |           |
| 38.83            | 0.04  |     | IDMS   | 83BRO 01  | 31                      | 1     |     | ITNA   | 73SHE 01  |
| <u>Rb (ug/g)</u> |       |     |        |           | 36                      | 2     |     | ITNA   | 84KUL 01  |
| 31.41            | 0.08  |     | IDMS   | 83LIP 01  | 37.55                   | 0.04  | 17  | IDMS   | 73BAR 01  |
| 31.44            | 0.31  |     | IDMS   | 73MOO 01  | 37.79                   | 0.017 | 17  | IDMS   | 73BAR 01  |
| 31.7             |       |     | UU     | 77HAN 02  | 38.43                   | 0.42  |     | ITNA   | 73KIM 01  |
| 32               | 1.4   |     | PAA    | 80KAN 01  | <u>Ti (ug/g)</u>        |       |     |        |           |
| 36               | 4     |     | ITNA   | 84KUL 01  | 50                      | 0.3   |     | POL    | 73MAI 01  |
| <u>Sb (ug/g)</u> |       |     |        |           | 55.2                    | 8.3   |     | PAA    | 80KAN 01  |
| 32.2             | 1.6   |     | ITNA   | 84KUL 01  | <u>Tl (ug/g)</u>        |       |     |        |           |
| 39.4             | 0.3   |     | PAA    | 80KAN 01  | 15.68                   | 0.1   |     | IDMS   | 73BAR 01  |
| 45.2             | 6.74  |     | ITNA   | 73KIM 01  |                         |       |     |        |           |

TABLE 612-2: INDIVIDUAL DATA FOR NBS SRM 612 (cont.)

| Conc                  | Uncer  | Com | Method | Reference | Conc                      | Uncer   | Com | Method | Reference |
|-----------------------|--------|-----|--------|-----------|---------------------------|---------|-----|--------|-----------|
| <u>U (ug/g)</u>       |        |     |        |           | <u>U-235/238 (atom %)</u> |         |     |        |           |
| 35.74                 |        |     | NT     | 80VIR 01  | 0.00229                   | 0.00011 |     | RTNA   | 84GLA 02  |
| 36.3                  | 7.2    | 17  | DNA    | 82CON 01  |                           |         |     |        |           |
| 36.9                  | 1.8    |     | NT     | 72CAR 01  | <u>V (ug/g)</u>           |         |     |        |           |
| 37.37                 | 0.015  | 17  | IDMS   | 73BAR 01  | 58.6                      | 6       |     | ITNA   | 84KUL 01  |
| 37.37                 | 0.064  |     | IDMS   | 86FIS 01  | <u>Y (ug/g)</u>           |         |     |        |           |
| 37.39                 | 0.09   | D   | IDMS   | 72CAR 01  | 37.9                      | 1.4     |     | PAA    | 80KAN 01  |
| 37.41                 | 0.09   | 17  | IDMS   | 73BAR 01  | <u>Yb (ug/g)</u>          |         |     |        |           |
| 37.41                 | 0.21   | D   | IDMS   | 72CAR 01  | 40                        | 3       |     | ITNA   | 84KUL 01  |
| 37.66                 | 0.08   |     | IDMS   | 77GUL 01  | 55                        | 7.15    |     | ITNA   | 73KIM 01  |
| 39                    | 4.9    | 17  | DNA    | 82CON 01  | <u>Zr (ug/g)</u>          |         |     |        |           |
| 40                    |        |     | DNA    | 84GLA 02  | 41.8                      | 1.1     |     | PAA    | 80KAN 01  |
| 43.6                  | 1.6    |     | ITNA   | 84KUL 01  |                           |         |     |        |           |
| <u>U-235 (atom %)</u> |        |     |        |           |                           |         |     |        |           |
| 0.2392                | 0.0004 |     | IDMS   | 72CAR 01  |                           |         |     |        |           |

TABLE 614-1: COMPILED DATA FOR NBS SRM 614 TRACE ELEMENTS IN GLASS (revised 3/1/86)

| ELEMENT | UNITS  | NBS               | CONSENSUS       |     | MEDIAN | RANGE        | METHOD MEANS      |            |
|---------|--------|-------------------|-----------------|-----|--------|--------------|-------------------|------------|
|         |        | Mean $\pm$ SD     | Mean $\pm$ SD   | (n) |        |              | Mean $\pm$ SD     | (n) Method |
| Ag      | ug/g   | 0.42 $\pm$ 0.04   | 0.52            | (2) | ---    | 0.471 - 0.57 | 0.57              | (1) NAA    |
| Ag      | ug/g   | ---               | ---             | --- | ---    | ---          | 0.471             | (1) AA     |
| Au      | ng/g   | 500               | 580 $\pm$ 300   | (4) | 510    | 280 - 1000   | 690 $\pm$ 270     | (3) NAA    |
| Au      | ug/g   | ---               | ---             | --- | ---    | ---          | 280               | (1) AA     |
| B       | ug/g   | 1.3 $\pm$ 0.2     | 1.14            | (2) | ---    | 0.99 - 1.29  | 0.99              | (1) TCGS   |
| B       | ug/g   | ---               | ---             | --- | ---    | ---          | 1.29              | (1) NT     |
| B-10    | atom % | ---               | 19.827          | (1) | ---    | ---          | 19.827            | (1) IDMS   |
| Br      | ug/g   | ---               | < 1             | --- | ---    | ---          | < 1               | NAA        |
| Ca      | %      | 8.6               | 7.92            | (1) | ---    | ---          | 7.92              | (1) NAA    |
| Cd      | ng/g   | 550               | ---             | --- | ---    | ---          | ---               | ---        |
| Ce      | ug/g   | ---               | 1.24            | (1) | ---    | ---          | 1.24              | (1) NAA    |
| Co      | ug/g   | 0.73 $\pm$ 0.02   | 1.2 $\pm$ 0.5   | (4) | 0.85   | 0.59 - 1.66  | 1.2 $\pm$ 0.5     | (4) NAA    |
| Cr      | ug/g   | ---               | 1.81            | (1) | ---    | ---          | 1.81              | (1) NAA    |
| Cs      | ng/g   | ---               | 720             | (2) | ---    | 590 - 860    | 725               | (2) NAA    |
| Cu      | ug/g   | 1.37 $\pm$ 0.07   | 1.61            | (1) | ---    | ---          | 1.61              | (1) AA     |
| Dy      | ug/g   | ---               | 1.4             | (1) | ---    | ---          | 1.4               | (1) NAA    |
| Eu      | ug/g   | 0.99 $\pm$ 0.04   | 0.85 $\pm$ 0.28 | (3) | 0.91   | 0.54 - 1.10  | 0.85 $\pm$ 0.28   | (3) NAA    |
| Fe      | ug/g   | 13.3 $\pm$ 1      | 13.8 $\pm$ 1.0  | (3) | 13.5   | 13 - 15      | 15                | (1) NAA    |
| Fe      | ug/g   | ---               | ---             | --- | ---    | ---          | 13                | (1) AA     |
| Fe      | ug/g   | ---               | ---             | --- | ---    | ---          | 13.5              | (1) POL    |
| Ga      | ug/g   | 1.3               | ---             | --- | ---    | ---          | ---               | ---        |
| Gd      | ug/g   | ---               | 0.75            | (2) | ---    | 0.70 - 0.80  | 0.75              | (2) TCGS   |
| Hf      | ug/g   | ---               | 0.88            | (2) | ---    | 0.55 - 1.2   | 0.88              | (2) NAA    |
| K       | ug/g   | 30 $\pm$ 1        | ---             | --- | ---    | ---          | ---               | ---        |
| La      | ng/g   | 830 $\pm$ 20      | 680             | (1) | ---    | ---          | 680               | (1) NAA    |
| Lu      | ng/g   | ---               | 630             | (1) | ---    | ---          | 630               | (1) NAA    |
| Mn      | ug/g   | ---               | < 3.8           | --- | ---    | ---          | < 3.8             | NAA        |
| Na      | %      | 10.4              | 10.39           | (1) | ---    | ---          | 10.39             | (1) NAA    |
| Ni      | ug/g   | 0.95              | 0.95            | (1) | ---    | ---          | 0.95              | (1) POL    |
| Pb      | ug/g   | 2.32 $\pm$ 0.04   | 2.30 $\pm$ 0.06 | (4) | 2.32   | 2.22 - 2.35  | 2.33 $\pm$ 0.02   | (3) IDMS   |
| Pb      | ug/g   | ---               | ---             | --- | ---    | ---          | 2.22              | (1) AA     |
| Rb      | ug/g   | 0.855 $\pm$ 0.005 | 0.89            | (2) | ---    | 0.855 - 0.92 | 0.92              | (1) NAA    |
| Rb      | ug/g   | ---               | ---             | --- | ---    | ---          | 0.855             | (1) IDMS   |
| Sb      | ug/g   | 1.06              | 1.03 $\pm$ 0.10 | (3) | 1.08   | 0.91 - 1.10  | 1.03 $\pm$ 0.10   | (3) NAA    |
| Sc      | ng/g   | 590 $\pm$ 40      | 720 $\pm$ 100   | (3) | 680    | 640 - 840    | 720 $\pm$ 100     | (3) NAA    |
| Sm      | ug/g   | ---               | 0.75 $\pm$ 0.12 | (3) | 0.69   | 0.68 - 0.89  | 0.89              | (1) NAA    |
| Sm      | ug/g   | ---               | ---             | --- | ---    | ---          | 0.68              | (2) TCGS   |
| Sr      | ug/g   | 45.8 $\pm$ 0.1    | 45.82           | (1) | ---    | ---          | 45.82             | (1) IDMS   |
| Ta      | ug/g   | ---               | 0.97            | (2) | ---    | 0.96 - 0.98  | 0.97              | (2) NAA    |
| Tb      | ng/g   | ---               | 560             | (2) | ---    | 510 - 620    | 565               | (2) NAA    |
| Th      | ng/g   | 748 $\pm$ 6       | 744 $\pm$ 9     | (4) | 746    | 730 - 750    | 740               | (2) NAA    |
| Th      | ug/g   | ---               | ---             | --- | ---    | ---          | 747.5             | (2) IDMS   |
| Ti      | ug/g   | 3.1 $\pm$ 0.3     | 3.1             | (1) | ---    | ---          | 3.1               | (1) POL    |
| Tl      | ng/g   | 269 $\pm$ 5       | 280             | (2) | ---    | 269 - 290    | 290               | (1) NAA    |
| Tl      | ug/g   | ---               | ---             | --- | ---    | ---          | 269               | (1) IDMS   |
| U       | ug/g   | 0.823 $\pm$ 0.002 | 0.82 $\pm$ 0.04 | (6) | 0.8230 | 0.74 - 0.87  | 0.87              | (1) NAA    |
| U       | ug/g   | ---               | ---             | --- | ---    | ---          | 0.822 $\pm$ 0.005 | (3) IDMS   |
| U       | ug/g   | ---               | ---             | --- | ---    | ---          | 0.7835            | (2) NT     |
| U-235   | atom % | 0.2792            | 0.2792          | (1) | ---    | ---          | 0.2792            | (1) IDMS   |
| V       | ug/g   | ---               | < 13            | --- | ---    | ---          | < 13              | NAA        |
| Yb      | ug/g   | ---               | 1.06            | (2) | ---    | 0.74 - 1.38  | 1.06              | (2) NAA    |

TABLE 614-2: INDIVIDUAL DATA FOR NBS SRM 614 (revised 3/1/86)

| Conc                 | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|----------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ug/g)</u>     |       |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| 0.471                | 0.06  |     | FAA    | 82JEN 02  | <                | 9     |     | ITNA   | 84KUL 01  |
| 0.57                 | 0.07  |     | ITNA   | 73SHE 01  | 1.61             | 0.32  |     | FAA    | 82JEN 02  |
| <u>Au (ng/g)</u>     |       |     |        |           | <u>Dy (ug/g)</u> |       |     |        |           |
| 280                  | 140   |     | FAA    | 82JEN 02  | 1.4              | 0.3   |     | ITNA   | 84KUL 01  |
| 510                  | 20    |     | ITNA   | 84KUL 01  |                  |       |     |        |           |
| 550                  | 50    |     | ITNA   | 73KIM 01  | <u>Eu (ug/g)</u> |       |     |        |           |
| 1000                 | 800   |     | ITNA   | 73SHE 01  | 0.54             | 0.05  |     | ITNA   | 73KIM 01  |
| <u>B (ug/g)</u>      |       |     |        |           | 0.91             | 0.07  |     | ITNA   | 84KUL 01  |
| 0.99                 | 0.32  |     | TCGS   | 84GLA 01  | 1.1              | 0.6   |     | ITNA   | 73SHE 01  |
| 1.29                 | 0.05  |     | NT     | 72CAR 01  | <u>Fe (ug/g)</u> |       |     |        |           |
| 2.5                  | 1.7   | 6   | TCGS   | 76GLA 01  | 13               |       |     | FAA    | 84HEA 01  |
| 2.6                  | 1.5   | 6   | TCGS   | 76GLA 01  | 13.5             | 0.7   |     | POL    | 73MAI 01  |
| 2.9                  | 1.5   | 6   | TCGS   | 76GLA 01  | 15               | 2     |     | ITNA   | 84KUL 01  |
| <u>B-10 (atom %)</u> |       |     |        |           | <u>Gd (ug/g)</u> |       |     |        |           |
| 19.827               |       |     | IDMS   | 72CAR 01  | 0.7              | 0.4   | 4   | TCGS   | 85GLA 05  |
| <u>Br (ug/g)</u>     |       |     |        |           | 0.8              | 0.2   | 4   | TCGS   | 85GLA 05  |
| <                    | 1     |     | ITNA   | 84KUL 01  | <u>Hf (ug/g)</u> |       |     |        |           |
| <u>Ca (%)</u>        |       |     |        |           | 0.55             | 0.06  |     | ITNA   | 84KUL 01  |
| 7.92                 | 0.78  |     | ITNA   | 84KUL 01  | 1.2              | 0.18  |     | ITNA   | 73KIM 01  |
| <u>Ce (ug/g)</u>     |       |     |        |           | <u>La (ng/g)</u> |       |     |        |           |
| 1.24                 | 0.09  |     | ITNA   | 84KUL 01  | <                | 2000  |     | ITNA   | 73SHE 01  |
| <u>Co (ug/g)</u>     |       |     |        |           | 680              | 120   |     | ITNA   | 84KUL 01  |
| 0.59                 | 0.1   |     | ITNA   | 73SHE 01  | <u>Lu (ng/g)</u> |       |     |        |           |
| 0.85                 | 0.09  |     | ITNA   | 84KUL 01  | 630              | 80    |     | ITNA   | 84KUL 01  |
| 1.63                 | 0.09  |     | ITNA   | 73KIM 01  | <u>Mn (ug/g)</u> |       |     |        |           |
| 1.66                 | 0.17  |     | ITNA   | 73KIM 01  | <                | 3.8   |     | ITNA   | 84KUL 01  |
| <u>Cr (ug/g)</u>     |       |     |        |           | <u>Na (%)</u>    |       |     |        |           |
| 1.81                 | 0.2   |     | ITNA   | 73KIM 01  | 10.39            | 0.22  |     | ITNA   | 84KUL 01  |
| <u>Cs (ng/g)</u>     |       |     |        |           | <u>Ni (ug/g)</u> |       |     |        |           |
| 590                  | 50    |     | ITNA   | 73KIM 01  | 0.95             | 0.08  |     | POL    | 73MAI 01  |
| 860                  | 30    |     | ITNA   | 84KUL 01  |                  |       |     |        |           |

TABLE 614-2: INDIVIDUAL DATA FOR NBS SRM 614 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                  | Uncer  | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|-----------------------|--------|-----|--------|-----------|
| <u>Pb (ug/g)</u> |       |     |        |           | <u>Th (ng/g)</u>      |        |     |        |           |
| 2.22             |       |     | FAA    | 84HEA 01  | 580                   | 150    |     | ITNA   | 73SHE 01  |
| 2.32             | 0.016 | 17  | IDMS   | 73BAR 01  | 730                   | 90     |     | ITNA   | 84KUL 01  |
| 2.33             | 0.006 | 17  | IDMS   | 73BAR 01  | 746                   | 3      | 17  | IDMS   | 73BAR 01  |
| 2.35             | 0.005 |     | IDMS   | 86FIS 01  | 749                   | 2      | 17  | IDMS   | 73BAR 01  |
|                  |       |     |        |           | 750                   | 10     |     | ITNA   | 73KIM 01  |
| <u>Rb (ug/g)</u> |       |     |        |           | <u>Ti (ug/g)</u>      |        |     |        |           |
| 0.855            | 0.005 |     | IDMS   | 73MOO 01  | 3.1                   | 0.2    |     | POL    | 73MAI 01  |
| 0.92             | 0.11  |     | ITNA   | 84KUL 01  |                       |        |     |        |           |
| <u>Sb (ug/g)</u> |       |     |        |           | <u>Tl (ng/g)</u>      |        |     |        |           |
| 0.91             | 0.01  |     | ITNA   | 84KUL 01  | 269                   | 1      |     | IDMS   | 73BAR 01  |
| 1.08             | 0.11  |     | ITNA   | 73KIM 01  | 290                   | 50     |     | RTNA   | 82COH 01  |
| 1.1              | 0.1   |     | ITNA   | 73SHE 01  |                       |        |     |        |           |
| <u>Sc (ng/g)</u> |       |     |        |           | <u>U (ug/g)</u>       |        |     |        |           |
| 640              | 20    |     | ITNA   | 84KUL 01  | 0.74                  |        |     | NT     | 80VIR 01  |
| 680              | 230   |     | ITNA   | 73SHE 01  | 0.817                 | 0.009  |     | IDMS   | 86FIS 01  |
| 840              | 10    |     | ITNA   | 73KIM 01  | 0.823                 | 0.0007 | 17  | IDMS   | 73BAR 01  |
|                  |       |     |        |           | 0.823                 | 0.002  | D   | IDMS   | 72CAR 01  |
|                  |       |     |        |           | 0.827                 | 0.0025 | 17  | IDMS   | 73BAR 01  |
|                  |       |     |        |           | 0.827                 | 0.007  |     | NT     | 72CAR 01  |
|                  |       |     |        |           | 0.828                 | 0.05   | D   | IDMS   | 72CAR 01  |
|                  |       |     |        |           | 0.87                  | 0.14   |     | ITNA   | 84KUL 01  |
| <u>Sm (ug/g)</u> |       |     |        |           | <u>U-235 (atom %)</u> |        |     |        |           |
| 0.68             | 0.1   | 4   | TCGS   | 85GLA 05  | 0.2792                | 0.0004 |     | IDMS   | 72CAR 01  |
| 0.69             | 0.1   | 4   | TCGS   | 85GLA 05  |                       |        |     |        |           |
| 0.89             | 0.06  |     | ITNA   | 84KUL 01  |                       |        |     |        |           |
| <u>Sr (ug/g)</u> |       |     |        |           | <u>V (ug/g)</u>       |        |     |        |           |
| 45.82            | 0.09  |     | IDMS   | 73MOO 01  | <                     | 13     |     | ITNA   | 84KUL 01  |
| <u>Ta (ug/g)</u> |       |     |        |           | <u>Yb (ug/g)</u>      |        |     |        |           |
| 0.96             | 0.05  |     | ITNA   | 84KUL 01  | 0.74                  | 0.06   |     | ITNA   | 84KUL 01  |
| 0.98             | 0.04  |     | ITNA   | 73KIM 01  | 1.38                  | 0.01   |     | ITNA   | 73KIM 01  |
| <u>Tb (ng/g)</u> |       |     |        |           |                       |        |     |        |           |
| 510              | 40    |     | ITNA   | 84KUL 01  |                       |        |     |        |           |
| 620              | 60    |     | ITNA   | 73KIM 01  |                       |        |     |        |           |

TABLE 616-1: COMPILED DATA FOR NBS SRM 616 TRACE ELEMENTS IN GLASS (revised 3/1/86)

| ELEMENT | UNITS  | NBS              | CONSENSUS          | MEDIAN | RANGE       | METHOD MEANS |            |
|---------|--------|------------------|--------------------|--------|-------------|--------------|------------|
|         |        | Mean $\pm$ SD    | Mean $\pm$ SD (n)  |        |             | Mean         | (n) Method |
| Au      | ng/g   | 180 $\pm$ 10     | ---                | ---    | ---         | ---          |            |
| B       | ng/g   | 200 $\pm$ 20     | 220 (2)            | ---    | 203 - 230   | 230          | (1) TCGS   |
| B       | ng/g   | ---              | ---                | ---    | ---         | 203          | (1) NT     |
| B-10    | atom % | ---              | 19.827 (1)         | ---    | ---         | 19.827       | (1) IDMS   |
| Cu      | ng/g   | 800 $\pm$ 90     | ---                | ---    | ---         | ---          |            |
| Fe      | ug/g   | 11 $\pm$ 2       | 12 (2)             | ---    | 11 - 14     | 11           | (1) POL    |
| Fe      | ug/g   | ---              | ---                | ---    | ---         | 14           | (1) CPAA   |
| Ga      | ng/g   | 230 $\pm$ 20     | ---                | ---    | ---         | ---          |            |
| Gd      | ng/g   | ---              | < 10               | ---    | ---         | < 10         | TCGS       |
| K       | ug/g   | 29 $\pm$ 1       | ---                | ---    | ---         | ---          |            |
| La      | ng/g   | 34 $\pm$ 7       | ---                | ---    | ---         | ---          |            |
| Pb      | ug/g   | 1.85 $\pm$ 0.04  | 1.86 (2)           | ---    | 1.85 - 1.88 | 1.865        | (2) IDMS   |
| Rb      | ng/g   | 100 $\pm$ 7      | 99.8 (1)           | ---    | ---         | 99.8         | (1) IDMS   |
| Sb      | ng/g   | 78 $\pm$ 7       | 12 (1)             | ---    | ---         | 12           | (1) NAA    |
| Sc      | ng/g   | 26 $\pm$ 12      | 20 (1)             | ---    | ---         | 20           | (1) NAA    |
| Sm      | ng/g   | ---              | < 10               | ---    | ---         | < 10         | TCGS       |
| Sr      | ug/g   | 41.72 $\pm$ 0.05 | 41.72 (1)          | ---    | ---         | 41.72        | (1) IDMS   |
| Th      | ng/g   | 25.2 $\pm$ 0.7   | 23 $\pm$ 4 (3)     | 25.2   | 18 - 25.5   | 18           | (1) NAA    |
| Th      | ng/g   | ---              | ---                | ---    | ---         | 25.35        | (2) IDMS   |
| Ti      | ug/g   | 2.5 $\pm$ 0.7    | 2.5 (1)            | ---    | ---         | 2.5          | (1) POL    |
| Tl      | ng/g   | 8.2 $\pm$ 0.5    | 8.2 (1)            | ---    | ---         | 8.2          | (1) IDMS   |
| U       | ng/g   | 72.1 $\pm$ 1.3   | 72.3 $\pm$ 0.5 (3) | 72.5   | 71.7 - 72.6 | 72.15        | (2) IDMS   |
| U       | ng/g   | ---              | ---                | ---    | ---         | 72.5         | (1) NT     |
| U-235   | atom % | 0.6160           | 0.616 (1)          | ---    | ---         | 0.616        | (1) IDMS   |

TABLE 616-2: INDIVIDUAL DATA FOR NBS SRM 616 (revised 3/1/86)

| Conc                 | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|----------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>B (ng/g)</u>      |       |     |        |           | <u>Sc (ng/g)</u>      |       |     |        |           |
| 203                  | 57    |     | NT     | 72CAR 01  | 20                    | 4     |     | ITNA   | 73SHE 01  |
| 230                  | 130   |     | TCGS   | 84GLA 01  |                       |       |     |        |           |
| <u>B-10 (atom %)</u> |       |     |        |           | <u>Sm (ug/g)</u>      |       |     |        |           |
| 19.827               |       |     | IDMS   | 72CAR 01  | <                     | 0.01  | 4   | TCGS   | 85GLA 05  |
| <u>Fe (ug/g)</u>     |       |     |        |           | <u>Sr (ug/g)</u>      |       |     |        |           |
| 11                   | 0.8   |     | POL    | 73MAI 01  | 41.72                 | 0.02  |     | IDMS   | 73MOO 01  |
| 14                   | 3     |     | CPAA   | 74SWI 01  | <u>Th (ng/g)</u>      |       |     |        |           |
| <u>Gd (ug/g)</u>     |       |     |        |           | 18                    | 2     |     | ITNA   | 73SHE 01  |
| <                    | 0.01  | 4   | TCGS   | 85GLA 05  | 25.2                  | 0.3   | 17  | IDMS   | 73BAR 01  |
| <u>Pb (ug/g)</u>     |       |     |        |           | 25.5                  | 1.5   | 17  | IDMS   | 73BAR 01  |
| 1.85                 | 0.018 | 17  | IDMS   | 73BAR 01  | <u>Ti (ug/g)</u>      |       |     |        |           |
| 1.88                 | 0.014 | 17  | IDMS   | 73BAR 01  | 2.5                   | 0.2   |     | POL    | 73MAI 01  |
| <u>Rb (ng/g)</u>     |       |     |        |           | <u>Tl (ng/g)</u>      |       |     |        |           |
| 99.8                 | 0.6   |     | IDMS   | 73MOO 01  | 8.2                   | 0.1   |     | IDMS   | 73BAR 01  |
| <u>Sb (ng/g)</u>     |       |     |        |           | <u>U (ng/g)</u>       |       |     |        |           |
| 12                   | 20    |     | ITNA   | 73SHE 01  | 71.7                  | 0.5   | 17  | IDMS   | 73BAR 01  |
|                      |       |     |        |           | 71.7                  | 1.4   | D   | IDMS   | 72CAR 01  |
|                      |       |     |        |           | 72.5                  | 1.5   |     | NT     | 72CAR 01  |
|                      |       |     |        |           | 72.6                  | 0.4   | 17  | IDMS   | 73BAR 01  |
|                      |       |     |        |           | 72.9                  | 1.7   | D   | IDMS   | 72CAR 01  |
|                      |       |     |        |           | <u>U-235 (atom %)</u> |       |     |        |           |
|                      |       |     |        |           | 0.616                 | 0.001 |     | IDMS   | 72CAR 01  |

TABLE 633-1: COMPILED DATA FOR NBS SRM 633 PORTLAND CEMENT (RED CAP)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean (n) | RANGE         | METHOD |
|---------|-------|-------------|-----------------------|---------------|--------|
| Al      | %     | 2.0         | 2.00 (2)              | 1.95 - 2.06   | XRF    |
| B       | ug/g  | < 100       | ---                   | ---           | ---    |
| Ca      | %     | 45.34       | 46.11 (2)             | 46.02 - 46.20 | XRF    |
| F       | ug/g  | 800         | ---                   | ---           | ---    |
| Fe      | %     | 2.94        | 2.92 (1)              | ---           | XRF    |
| K       | ug/g  | 1400        | 1410 (1)              | ---           | XRF    |
| LOI     | %     | 0.75        | ---                   | ---           | ---    |
| Mg      | ug/g  | 6300        | 5900 (1)              | ---           | XRF    |
| Mn      | ug/g  | 280         | ---                   | ---           | ---    |
| Na      | ug/g  | 4700        | ---                   | ---           | ---    |
| P       | ug/g  | 1050        | ---                   | ---           | ---    |
| S       | %     | 0.88        | 1.8 (2)               | 0.88 - 2.78   | XRF    |
| Si      | %     | 10.22       | 10.22 (2)             | 10.2 - 10.25  | XRF    |
| Sr      | ug/g  | 2600        | ---                   | ---           | ---    |
| Ti      | ug/g  | 1440        | ---                   | ---           | ---    |
| Zn      | ug/g  | < 80        | ---                   | ---           | ---    |

TABLE 633-2: INDIVIDUAL DATA FOR NBS SRM 633 (revised 3/1/86)

| Conc            | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-----------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>   |       |     |        |           | <u>Mg (ug/g)</u> |       |     |        |           |
| 1.95            |       |     | XRF    | 74AND 03  | 5900             |       |     | XRF    | 79FRE 01  |
| 2.06            |       |     | XRF    | 79FRE 01  |                  |       |     |        |           |
| <u>Ca (%)</u>   |       |     |        |           | <u>S (%)</u>     |       |     |        |           |
| 46.02           |       |     | XRF    | 79FRE 01  | 0.88             |       |     | XRF    | 79FRE 01  |
| 46.2            |       |     | XRF    | 74AND 03  | 2.78             |       |     | XRF    | 79FRE 01  |
| <u>Fe (%)</u>   |       |     |        |           | <u>Si (%)</u>    |       |     |        |           |
| 2.92            |       |     | XRF    | 79FRE 01  | 10.2             |       |     | XRF    | 74AND 03  |
|                 |       |     |        |           | 10.25            |       |     | XRF    | 79FRE 01  |
| <u>K (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 1410            |       |     | XRF    | 79FRE 01  |                  |       |     |        |           |

TABLE 634-1: COMPILED DATA FOR NBS SRM 634 PORTLAND CEMENT (GOLD CAP)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean (n) | METHOD |
|---------|-------|-------------|-----------------------|--------|
| Al      | %     | 2.76        | 2.7 (1)               | XRF    |
| B       | ug/g  | < 100       | ---                   | ---    |
| Ca      | %     | 44.74       | 45 (1)                | XRF    |
| F       | ug/g  | 700         | ---                   | ---    |
| Fe      | %     | 1.98        | ---                   | ---    |
| K       | ug/g  | 3500        | ---                   | ---    |
| LOI     | %     | 1.61        | ---                   | ---    |
| Mn      | ug/g  | 1950        | ---                   | ---    |
| Na      | ug/g  | 1100        | ---                   | ---    |
| P       | ug/g  | 440         | ---                   | ---    |
| S       | ug/g  | 8840        | ---                   | ---    |
| Si      | %     | 9.68        | 9.57 (1)              | XRF    |
| Sr      | ug/g  | 1000        | ---                   | ---    |
| Ti      | ug/g  | 1800        | ---                   | ---    |
| Zn      | ug/g  | 160         | ---                   | ---    |

TABLE 634-2: INDIVIDUAL DATA FOR NBS SRM 634  
(revised 3/1/86)

| Conc          | Uncer | Com | Method | Reference |
|---------------|-------|-----|--------|-----------|
| <u>Al (%)</u> |       |     |        |           |
| 2.7           |       |     | XRF    | 74AND 03  |
| <u>Ca (%)</u> |       |     |        |           |
| 45            |       |     | XRF    | 74AND 03  |
| <u>Si (%)</u> |       |     |        |           |
| 9.57          |       |     | XRF    | 74AND 03  |

TABLE 635-1: COMPILED DATA FOR NBS SRM 635 PORTLAND CEMENT (BLUE CAP)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean (n) | RANGE        | METHOD |
|---------|-------|-------------|-----------------------|--------------|--------|
| Al      | %     | 3.33        | 3.36 (2)              | 3.33 - 3.40  | XRF    |
| Ca      | %     | 42.06       | 42.82 (2)             | 42.8 - 42.84 | XRF    |
| F       | ug/g  | 300         | ---                   | ---          | ---    |
| Fe      | %     | 1.82        | 1.85 (1)              | ---          | XRF    |
| K       | ug/g  | 3700        | 3800 (1)              | ---          | XRF    |
| LOI     | %     | 3.25        | ---                   | ---          | ---    |
| Mg      | ug/g  | ---         | 7120 (1)              | ---          | XRF    |
| Mn      | ug/g  | 630         | ---                   | ---          | ---    |
| Na      | ug/g  | 500         | ---                   | ---          | ---    |
| P       | ug/g  | 740         | ---                   | ---          | ---    |
| S       | %     | 2.83        | 2.82 (1)              | ---          | CB     |
| Si      | %     | 8.6         | 8.58 (2)              | 8.50 - 8.65  | XRF    |
| Sr      | ug/g  | 1780        | ---                   | ---          | ---    |
| Ti      | ug/g  | 1900        | ---                   | ---          | ---    |
| Zn      | ug/g  | 80          | ---                   | ---          | ---    |

TABLE 635-2: INDIVIDUAL DATA FOR NBS SRM 635 (revised 3/1/86)

| Conc          | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|---------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u> |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| 3.33          |       |     | XRF    | 79FRE 01  | 3800             |       |     | XRF    | 79FRE 01  |
| 3.4           |       |     | XRF    | 74AND 03  |                  |       |     |        |           |
| <u>Ca (%)</u> |       |     |        |           | <u>Mg (ug/g)</u> |       |     |        |           |
| 42.8          |       |     | XRF    | 74AND 03  | 7120             |       |     | XRF    | 79FRE 01  |
| 42.84         |       |     | XRF    | 79FRE 01  |                  |       |     |        |           |
| <u>Fe (%)</u> |       |     |        |           | <u>S (%)</u>     |       |     |        |           |
| 1.85          |       |     | XRF    | 79FRE 01  | 2.82             |       |     | CB     | 84LEC 02  |
|               |       |     |        |           | <u>Si (%)</u>    |       |     |        |           |
|               |       |     |        |           | 8.5              |       |     | XRF    | 74AND 03  |
|               |       |     |        |           | 8.65             |       |     | XRF    | 79FRE 01  |

TABLE 636-1: COMPILED DATA FOR NBS SRM 636 PORTLAND CEMENT (YELLOW CAP)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean (n) | RANGE         | METHOD  |
|---------|-------|-------------|-----------------------|---------------|---------|
| Al      | %     | 1.6         | 1.72 (2)              | 1.68 - 1.75   | XRF     |
| Ca      | %     | 45.43       | 45.46 (2)             | 45.43 - 45.5  | XRF     |
| F       | ug/g  | 500         | ---                   | ---           | ---     |
| Fe      | %     | 1.12        | 1.11 (1)              | ---           | XRF     |
| K       | ug/g  | 4900        | 4650 (1)              | ---           | XRF     |
| LOI     | %     | 1.16        | ---                   | ---           | ---     |
| Mg      | %     | ---         | 2.31 (1)              | ---           | XRF     |
| Mn      | ug/g  | 840         | ---                   | ---           | ---     |
| Na      | ug/g  | 820         | ---                   | ---           | ---     |
| P       | ug/g  | 390         | ---                   | ---           | ---     |
| S       | %     | 0.924       | 0.94 (2)              | 0.925 - 0.964 | CB, XRF |
| Si      | %     | 10.84       | 10.72 (2)             | 10.70 - 10.75 | XRF     |
| Sr      | ug/g  | 340         | ---                   | ---           | ---     |
| Ti      | ug/g  | 1000        | ---                   | ---           | ---     |
| Zn      | ug/g  | 240         | ---                   | ---           | ---     |

TABLE 636-2: INDIVIDUAL DATA FOR NBS SRM 636 (revised 3/1/86)

| Conc          | Uncer | Com | Method | Reference | Conc            | Uncer | Com | Method | Reference |
|---------------|-------|-----|--------|-----------|-----------------|-------|-----|--------|-----------|
| <u>Al (%)</u> |       |     |        |           | <u>K (ug/g)</u> |       |     |        |           |
| 1.68          |       |     | XRF    | 79FRE 01  | 4650            |       |     | XRF    | 79FRE 01  |
| 1.75          |       |     | XRF    | 74AND 03  |                 |       |     |        |           |
| <u>Ca (%)</u> |       |     |        |           | <u>Mg (%)</u>   |       |     |        |           |
| 45.43         |       |     | XRF    | 79FRE 01  | 2.31            |       |     | XRF    | 79FRE 01  |
| 45.5          |       |     | XRF    | 74AND 03  |                 |       |     |        |           |
| <u>Fe (%)</u> |       |     |        |           | <u>S (%)</u>    |       |     |        |           |
| 1.11          |       |     | XRF    | 79FRE 01  | 0.925           |       |     | CB     | 84LEC 02  |
|               |       |     |        |           | 0.964           |       |     | XRF    | 79FRE 01  |
|               |       |     |        |           | <u>Si (%)</u>   |       |     |        |           |
|               |       |     |        |           | 10.7            |       |     | XRF    | 74AND 03  |
|               |       |     |        |           | 10.75           |       |     | XRF    | 79FRE 01  |

TABLE 637-1: COMPILED DATA FOR NBS SRM 637 PORTLAND CEMENT (PINK CAP)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean (n) | RANGE        | METHOD |
|---------|-------|-------------|-----------------------|--------------|--------|
| Al      | %     | 1.74        | 1.76 (2)              | 1.75 - 1.76  | XRF    |
| Ca      | %     | 47.22       | 47.3 (2)              | 47.09 - 47.5 | XRF    |
| F       | ug/g  | 400         | ---                   | ---          | ---    |
| Fe      | %     | 1.26        | 1.22 (1)              | ---          | XRF    |
| K       | ug/g  | 2100        | 2080 (1)              | ---          | XRF    |
| LOI     | %     | 1.68        | ---                   | ---          | ---    |
| Mg      | ug/g  | ---         | 3900 (1)              | ---          | XRF    |
| Mn      | ug/g  | 420         | ---                   | ---          | ---    |
| Na      | ug/g  | 1100        | ---                   | ---          | ---    |
| P       | ug/g  | 1090        | ---                   | ---          | ---    |
| S       | %     | 0.952       | 0.964 (1)             | ---          | XRF    |
| Si      | %     | 10.77       | 10.8 (2)              | 10.8 - 10.8  | XRF    |
| Sr      | ug/g  | 760         | ---                   | ---          | ---    |
| Ti      | ug/g  | 1260        | ---                   | ---          | ---    |
| Zn      | ug/g  | 80          | ---                   | ---          | ---    |

TABLE 637-2: INDIVIDUAL DATA FOR NBS SRM 637 (revised 3/1/86)

| Conc            | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-----------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>   |       |     |        |           | <u>Mg (ug/g)</u> |       |     |        |           |
| 1.75            |       |     | XRF    | 74AND 03  | 3900             |       |     | XRF    | 79FRE 01  |
| 1.76            |       |     | XRF    | 79FRE 01  |                  |       |     |        |           |
| <u>Ca (%)</u>   |       |     |        |           | <u>S (%)</u>     |       |     |        |           |
| 47.09           |       |     | XRF    | 79FRE 01  | 0.964            |       |     | XRF    | 79FRE 01  |
| 47.5            |       |     | XRF    | 74AND 03  | <u>Si (%)</u>    |       |     |        |           |
| <u>Fe (%)</u>   |       |     |        |           | 10.8             |       |     | XRF    | 79FRE 01  |
| 1.22            |       |     | XRF    | 79FRE 01  | 10.8             |       |     | XRF    | 74AND 03  |
| <u>K (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 2080            |       |     | XRF    | 79FRE 01  |                  |       |     |        |           |

TABLE 638-1: COMPILED DATA FOR NBS SRM 638 PORTLAND CEMENT (GREEN CAP)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean (n) | RANGE       | METHOD |
|---------|-------|-------------|-----------------------|-------------|--------|
| Al      | %     | 2.35        | 2.41 (2)              | 2.40 - 2.42 | XRF    |
| B       | ug/g  | < 100       | ---                   | ---         | ---    |
| Ca      | %     | 44.39       | 44.35 (2)             | 44.3 - 44.4 | XRF    |
| F       | ug/g  | 400         | ---                   | ---         | ---    |
| Fe      | %     | 2.48        | 2.49 (1)              | ---         | XRF    |
| K       | ug/g  | 4900        | 4900 (1)              | ---         | XRF    |
| LOI     | %     | 0.95        | ---                   | ---         | ---    |
| Mg      | %     | ---         | 2.26 (1)              | ---         | XRF    |
| Mn      | ug/g  | 350         | ---                   | ---         | ---    |
| Na      | ug/g  | 960         | ---                   | ---         | ---    |
| P       | ug/g  | 260         | ---                   | ---         | ---    |
| S       | %     | 0.936       | 0.984 (1)             | ---         | XRF    |
| Si      | %     | 10.03       | 9.99 (2)              | 9.98 - 10.0 | XRF    |
| Sr      | ug/g  | 590         | ---                   | ---         | ---    |
| Ti      | ug/g  | 1500        | ---                   | ---         | ---    |
| Zn      | ug/g  | 720         | ---                   | ---         | ---    |

TABLE 638-2: INDIVIDUAL DATA FOR NBS SRM 638 (revised 3/1/86)

| Conc          | Uncer | Com | Method | Reference | Conc            | Uncer | Com | Method | Reference |
|---------------|-------|-----|--------|-----------|-----------------|-------|-----|--------|-----------|
| <u>Al (%)</u> |       |     |        |           | <u>K (ug/g)</u> |       |     |        |           |
| 2.4           |       |     | XRF    | 74AND 03  | 4900            |       |     | XRF    | 79FRE 01  |
| 2.42          |       |     | XRF    | 79FRE 01  |                 |       |     |        |           |
| <u>Ca (%)</u> |       |     |        |           | <u>Mg (%)</u>   |       |     |        |           |
| 44.3          |       |     | XRF    | 74AND 03  | 2.26            |       |     | XRF    | 79FRE 01  |
| 44.4          |       |     | XRF    | 79FRE 01  |                 |       |     |        |           |
| <u>Fe (%)</u> |       |     |        |           | <u>S (%)</u>    |       |     |        |           |
| 2.49          |       |     | XRF    | 79FRE 01  | 0.984           |       |     | XRF    | 79FRE 01  |
|               |       |     |        |           | <u>Si (%)</u>   |       |     |        |           |
|               |       |     |        |           | 9.98            |       |     | XRF    | 79FRE 01  |
|               |       |     |        |           | 10              |       |     | XRF    | 74AND 03  |

TABLE 639-1: COMPILED DATA FOR NBS SRM 639 PORTLAND CEMENT (CLEAR CAP)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean | CONSENSUS<br>Mean (r.) | RANGE        | METHOD |
|---------|-------|-------------|------------------------|--------------|--------|
| Al      | %     | 2.26        | 2.3 (2)                | 2.3 - 2.3    | XRF    |
| Ca      | %     | 47.02       | 47.14 (2)              | 47.07 - 47.2 | XRF    |
| F       | ug/g  | 200         | ---                    | ---          | ---    |
| Fe      | %     | 1.68        | 1.65 (1)               | ---          | XRF    |
| K       | ug/g  | 500         | 500 (1)                | ---          | XRF    |
| LOI     | %     | 1.0         | ---                    | ---          | ---    |
| Mg      | ug/g  | ---         | 7120 (1)               | ---          | XRF    |
| Mn      | ug/g  | 560         | ---                    | ---          | ---    |
| Na      | ug/g  | 480         | ---                    | ---          | ---    |
| P       | ug/g  | 350         | ---                    | ---          | ---    |
| S       | %     | 0.992       | 0.98 (1)               | ---          | XRF    |
| Si      | %     | 10.09       | 10.04 (2)              | 10.0 - 10.09 | XRF    |
| Sr      | ug/g  | 1270        | ---                    | ---          | ---    |
| Ti      | ug/g  | 1860        | ---                    | ---          | ---    |
| Zn      | ug/g  | 80          | ---                    | ---          | ---    |

TABLE 639-2: INDIVIDUAL DATA FOR NBS SRM 639 (revised 3/1/86)

| Conc          | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|---------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u> |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| 2.3           |       |     | XRF    | 79FRE 01  | 500              |       |     | XRF    | 79FRE 01  |
| 2.3           |       |     | XRF    | 74AND 03  | <u>Mg (ug/g)</u> |       |     |        |           |
| <u>Ca (%)</u> |       |     |        |           | 7120             |       |     | XRF    | 79FRE 01  |
| 47.07         |       |     | XRF    | 79FRE 01  | <u>S (%)</u>     |       |     |        |           |
| 47.2          |       |     | XRF    | 74AND 03  | 0.98             |       |     | XRF    | 79FRE 01  |
| <u>Fe (%)</u> |       |     |        |           | <u>Si (%)</u>    |       |     |        |           |
| 1.65          |       |     | XRF    | 79FRE 01  | 10               |       |     | XRF    | 74AND 03  |
|               |       |     |        |           | 10.09            |       |     | XRF    | 79FRE 01  |

TABLE 688-1: COMPILED DATA FOR NBS SRM 688 BASALT (revised 3/1/86)

| ELEMENT | UNITS | NBS         |     | CONSENSUS   |     | MEDIAN | RANGE       | NAA         |     | ICPES | XRF | OTHER METHODS |     |             |     |       |
|---------|-------|-------------|-----|-------------|-----|--------|-------------|-------------|-----|-------|-----|---------------|-----|-------------|-----|-------|
|         |       | Mean ± SD   | (n) | Mean ± SD   | (n) |        |             | Mean ± SD   | (n) |       |     | Mean ± SD     | (n) | Method      |     |       |
| Al      | %     | 9.18 ± 0.05 | (7) | 9.17 ± 0.16 | (7) | 9.18   | 8.89 - 9.34 | 8.89 ± 0.35 | (3) | 9.04  | (1) | 9.34          | (1) | 9.22 ± 0.07 | (3) | TCGS  |
| As      | ug/g  | ---         | (2) | 2.50        | (2) | ---    | 2.33 - 2.68 | 2.50        | (2) | ---   | --- | ---           | --- | ---         | --- | ---   |
| Au      | ng/g  | ---         | (2) | 2.1         | (2) | ---    | 0.9 - 3.3   | 2.1         | (2) | ---   | --- | ---           | --- | ---         | --- | ---   |
| B       | ug/g  | ---         | (3) | 1.33 ± 0.15 | (3) | 1.2    | 1.2 - 1.5   | ---         | --- | ---   | --- | ---           | --- | 1.22 ± 0.26 | (4) | TCGS  |
| Ba      | ug/g  | 200         | (5) | 197 ± 12    | (5) | 200    | 178 - 210   | 202 ± 7     | (3) | 178   | (1) | 200           | (1) | ---         | --- | ---   |
| Be      | ng/g  | ---         | (2) | 700         | (2) | ---    | 200 - 1200  | ---         | --- | 200   | (1) | ---           | --- | 1200        | (1) | OES   |
| C-Inorg | ug/g  | 140         | --- | ---         | --- | ---    | ---         | ---         | --- | ---   | --- | ---           | --- | ---         | --- | ---   |
| Ca      | %     | 8.7         | (7) | 8.47 ± 0.36 | (7) | 8.7    | 7.9 - 8.82  | 8.2         | (2) | 8.82  | (1) | 8.75          | (1) | 8.43 ± 0.46 | (3) | TCGS  |
| Ce      | ug/g  | 13.3        | (6) | 13 ± 2      | (6) | 12.87  | 10.1 - 16.7 | 13.4 ± 2.3  | (5) | 11.3  | (1) | ---           | --- | ---         | --- | ---   |
| Cl      | ug/g  | ---         | (3) | 33.9 ± 2.6  | (3) | 35     | 31 - 35.8   | ---         | --- | ---   | --- | ---           | --- | 35          | (2) | TCGS  |
| Cl      | ug/g  | ---         | --- | ---         | --- | ---    | ---         | ---         | --- | ---   | --- | ---           | --- | 31          | (1) | ISE   |
| Co      | ug/g  | 49.7        | (7) | 49 ± 3      | (7) | 47.5   | 46.1 - 55.6 | 50 ± 4      | (5) | 47    | (1) | 50            | (1) | ---         | --- | ---   |
| Cr      | ug/g  | 332 ± 9     | (7) | 310 ± 50    | (7) | 328    | 230 - 377   | 337 ± 22    | (5) | 260   | (1) | 230           | (1) | ---         | --- | ---   |
| Cs      | ng/g  | ---         | (3) | 240 ± 150   | (3) | 210    | 110 - 400   | 240 ± 150   | (3) | ---   | --- | ---           | --- | ---         | --- | ---   |
| Cu      | ug/g  | 96          | (1) | 90          | (1) | ---    | ---         | ---         | --- | 90    | (1) | ---           | --- | ---         | --- | ---   |
| DY      | ug/g  | ---         | (6) | 3.4 ± 0.2   | (6) | 3.4    | 3.1 - 3.8   | 3.3 ± 0.2   | (3) | 3.8   | (1) | ---           | --- | 3.4         | (2) | AA    |
| Er      | ug/g  | ---         | (3) | 2.11 ± 0.18 | (3) | 2.2    | 1.9 - 2.22  | ---         | --- | 1.9   | (1) | ---           | --- | 2.21        | (2) | AA    |
| Eu      | ug/g  | 1.07        | (6) | 1.01 ± 0.02 | (6) | 1.01   | 0.99 - 1.04 | 1.01 ± 0.02 | (5) | 1.01  | (1) | ---           | --- | ---         | --- | ---   |
| F       | ug/g  | 200         | --- | ---         | --- | ---    | ---         | ---         | --- | ---   | --- | ---           | --- | ---         | --- | ---   |
| Fe      | %     | 7.23 ± 0.03 | (8) | 7.17 ± 0.11 | (8) | 7.19   | 7.03 - 7.34 | 7.17 ± 0.07 | (3) | 7.34  | (1) | 7.19          | (1) | 7.1 ± 0.12  | (3) | TCGS  |
| Fe203   | %     | ---         | (1) | 1.8         | (1) | ---    | ---         | ---         | --- | ---   | --- | ---           | --- | 1.8         | (1) | CALC  |
| FeO     | %     | 7.64 ± 0.03 | (2) | 7.645       | (2) | ---    | 7.64 - 7.65 | ---         | --- | ---   | --- | ---           | --- | 7.65        | (1) | COLOR |
| FeO     | %     | ---         | --- | ---         | --- | ---    | ---         | ---         | --- | ---   | --- | ---           | --- | 7.64        | (1) | TITR  |
| Ga      | ug/g  | ---         | (2) | 17.4        | (2) | ---    | 17 - 17.7   | 37.4        | (2) | 17    | (1) | ---           | --- | ---         | --- | ---   |
| Gd      | ug/g  | ---         | (7) | 3.2 ± 0.4   | (7) | 3.3    | 2.5 - 3.7   | 2.5         | (1) | 3.6   | (1) | ---           | --- | 3.23 ± 0.38 | (5) | TCGS  |
| H       | ug/g  | ---         | (2) | 400         | (2) | ---    | 390 - 410   | ---         | --- | ---   | --- | ---           | --- | 400         | (2) | TCGS  |
| H2O+    | %     | ---         | (1) | 0.14        | (1) | ---    | ---         | ---         | --- | ---   | --- | ---           | --- | 0.14        | (1) | COUL  |
| H2O-    | %     | ---         | (1) | 0.11        | (1) | ---    | ---         | ---         | --- | ---   | --- | ---           | --- | 0.11        | (1) | COUL  |
| Hf      | ug/g  | 1.6         | (3) | 1.55 ± 0.08 | (3) | 1.58   | 1.46 - 1.62 | 1.55 ± 0.08 | (3) | ---   | --- | ---           | --- | ---         | --- | ---   |
| Ho      | ng/g  | ---         | (3) | 810 ± 10    | (3) | 810    | 800 - 820   | ---         | --- | 800   | (1) | ---           | --- | 815         | (2) | AA    |
| Ir      | ng/g  | ---         | --- | < 1.8       | --- | ---    | ---         | < 1.8       | --- | ---   | --- | ---           | --- | ---         | --- | ---   |
| K       | ug/g  | 1550 ± 70   | (5) | 1590 ± 70   | (5) | 1590   | 1530 - 1700 | ---         | --- | 1620  | (1) | 1590          | (1) | 1590 ± 100  | (3) | TCGS  |

TABLE 688-1: COMPILED DATA FOR NBS SRM 688 BASALT (cont.)

| ELEMENT | UNITS | NBS         |    | CONSENSUS    |      | MEDIAN | RANGE         | NAA         |     | ICPES | XRF | OTHER METHODS |     |                      |
|---------|-------|-------------|----|--------------|------|--------|---------------|-------------|-----|-------|-----|---------------|-----|----------------------|
|         |       | Mean        | SD | Mean         | SD   |        |               | Mean        | SD  |       |     | Mean          | SD  | Method               |
| La      | ug/g  | ---         |    | 5.3 ± 0.4    | (7)  | 5.3    | 4.8 - 5.9     | 5.4 ± 0.5   | (5) | 5.3   | (1) | 5.0           | (1) | ---                  |
| Li      | ug/g  | ---         |    | 7.0          | (1)  | ---    | ---           | ---         |     | 7.0   | (1) | ---           |     | ---                  |
| Lu      | ng/g  | 340         |    | 350 ± 40     | (5)  | 340    | 330 - 420     | 360 ± 40    | (4) | 330   | (1) | ---           |     | ---                  |
| Mg      | %     | 5.1         |    | 5.26 ± 0.22  | (7)  | 5.22   | 5 - 5.7       | 5.56        | (2) | 5.08  | (1) | 5.22          | (1) | 5.44 ± 0.23 (3) TCGS |
| Mg      | %     | ---         |    | ---          |      | ---    | ---           | ---         |     | ---   |     | ---           |     | 5.2 (1) AA           |
| Mn      | ug/g  | 1290 ± 20   |    | 1210 ± 60    | (8)  | 1220   | 1120 - 1290   | 1200 ± 80   | (3) | 1240  | (1) | 1220          | (1) | 1190 ± 60 (3) TCGS   |
| Na      | %     | 1.6 ± 0.02  |    | 1.55 ± 0.08  | (8)  | 1.57   | 1.39 - 1.63   | 1.50 ± 0.10 | (4) | 1.63  | (1) | 1.57          | (1) | 1.61 (2) TCGS        |
| Nb      | ug/g  | ---         |    | 5.0          | (2)  | ---    | 5 - 5         | ---         |     | 5.0   | (1) | 5.0           | (1) | ---                  |
| Nd      | ug/g  | ---         |    | 9.6 ± 1.1    | (3)  | 9.95   | 8.38 - 10.4   | 9.2         | (2) | 10.4  | (1) | ---           |     | ---                  |
| Ni      | ug/g  | 150         |    | 158 ± 30     | (4)  | 143    | 123 - 186     | 154         | (2) | 143   | (1) | 180           | (1) | ---                  |
| P       | ug/g  | 580 ± 10    |    | 700 ± 200    | (3)  | 620    | 560 - 930     | ---         |     | 560   | (1) | 620           | (1) | 930 (1) COLOR        |
| Pb      | ug/g  | 3.3 ± 0.2   |    | < 4          |      | ---    | ---           | ---         |     | < 4   |     | ---           |     | ---                  |
| Pr      | ug/g  | ---         |    | 2.4          | (1)  | ---    | ---           | ---         |     | 2.4   | (1) | ---           |     | ---                  |
| Rb      | ug/g  | 1.91 ± 0.01 |    | 2.6          | (2)  | ---    | 2.18 - 3.0    | 2.18        | (1) | ---   |     | 3.0           | (1) | ---                  |
| Sb      | ng/g  | ---         |    | 300 ± 200    | (3)  | 420    | 87 - 466      | 300 ± 200   | (3) | ---   |     | ---           |     | ---                  |
| Sc      | ug/g  | 38.1        |    | 38 ± 3       | (7)  | 36.3   | 35.2 - 43.3   | 36.7 ± 1.5  | (6) | 43.3  | (1) | ---           |     | ---                  |
| Se      | ug/g  | ---         |    | < 3          |      | ---    | ---           | < 3         |     | ---   |     | ---           |     | ---                  |
| Si      | %     | 22.6 ± 0.05 |    | 22.52 ± 0.15 | (4)  | 22.39  | 22.39 - 22.69 | ---         |     | ---   |     | 22.69         | (1) | 22.6 (1) COLOR       |
| Si      | %     | ---         |    | ---          |      | ---    | ---           | ---         |     | ---   |     | ---           |     | 22.4 (2) TCGS        |
| Sm      | ug/g  | 2.79        |    | 2.5 ± 0.2    | (12) | 2.4    | 2.09 - 2.9    | 2.4 ± 0.2   | (6) | 2.9   | (1) | ---           |     | 2.44 ± 0.12 (5) TCGS |
| Sr      | ug/g  | 169.2 ± 0.7 |    | 172 ± 4      | (4)  | 170.3  | 170 - 179     | 179         | (1) | 170   | (1) | 171           | (2) | ---                  |
| Ta      | ng/g  | ---         |    | 310 ± 70     | (3)  | 310    | 246 - 380     | 310 ± 70    | (3) | ---   |     | ---           |     | ---                  |
| Tb      | ng/g  | 448         |    | 520 ± 40     | (5)  | 520    | 462 - 580     | 520 ± 40    | (5) | ---   |     | ---           |     | ---                  |
| Th      | ng/g  | 330 ± 20    |    | 360 ± 80     | (3)  | 320    | 310 - 460     | 360 ± 80    | (3) | ---   |     | ---           |     | ---                  |
| Ti      | ug/g  | 7000 ± 60   |    | 7090 ± 190   | (6)  | 7000   | 6900 - 7390   | 7000        | (1) | 7390  | (1) | 7130          | (1) | 7000 ± 170 (3) TCGS  |
| Tm      | ng/g  | ---         |    | 290 ± 60     | (3)  | 264    | 250 - 360     | 360         | (1) | ---   |     | ---           |     | 257 (2) AA           |
| U       | ng/g  | 370         |    | 310 ± 24     | (4)  | 310    | 280 - 340     | 310 ± 25    | (4) | ---   |     | ---           |     | ---                  |
| V       | ug/g  | 250         |    | 242 ± 8      | (4)  | 235    | 235 - 248     | 242         | (2) | 248   | (1) | 235           | (1) | ---                  |
| Y       | ug/g  | ---         |    | 17 ± 2       | (3)  | 18     | 14.8 - 19.5   | ---         |     | 19.5  | (1) | 16.4          | (2) | ---                  |
| Yb      | ug/g  | 2.09        |    | 2.05 ± 0.20  | (7)  | 2.06   | 1.77 - 2.36   | 2.04 ± 0.23 | (5) | 2.2   | (1) | ---           |     | 1.97 (1) AA          |
| Zn      | ug/g  | 58          |    | 84 ± 10      | (4)  | 79     | 73 - 94       | 90          | (1) | 79    | (1) | 73            | (1) | 94 (1) AA            |
| Zr      | ug/g  | ---         |    | 60.6 ± 1.9   | (5)  | 60.8   | 58.6 - 63     | 59.7        | (2) | 63    | (1) | 60.4          | (2) | ---                  |

TABLE 688-2: INDIVIDUAL DATA FOR NBS SRM 688 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>    |       |     |        |           | <u>Ce (ug/g)</u> |       |     |        |           |
| 8.54             | 0.39  |     | ITNA   | 82GRA 01  | 10.1             | 3.9   |     | ITNA   | 82GRA 01  |
| 8.89             | 0.11  |     | ITNA   | 85GLA 01  | 11.3             | 0.4   |     | ICPES  | 83CRO 01  |
| 9.04             | 0.05  |     | ICPES  | 83CRO 01  | 12.87            | 0.2   |     | ITNA   | 83BOY 01  |
| 9.18             | 0.09  |     | TCGS   | 85AND 01  | 13.4             | 0.6   |     | ITNA   | 85GLA 01  |
| 9.18             | 0.09  |     | TCGS   | 83AND 01  | 13.7             | 0.5   |     | RTNA   | 85GAU 04  |
| 9.24             | 0.1   |     | IENA   | 85GLA 02  | 16.7             | 1     |     | RTNA   | 84GLA 11  |
| 9.3              | 0.2   |     | TCGS   | 82GRA 01  | 25               | 25    |     | WXRF   | 85GLA 01  |
| 9.34             | 0.08  |     | WXRF   | 85GLA 01  | <u>Cl (ug/g)</u> |       |     |        |           |
| <u>As (ug/g)</u> |       |     |        |           | 31               | 3     |     | ISE    | 86ELS 01  |
| 2.33             | 0.05  |     | ITNA   | 83BOY 01  | 35               | 1     |     | TCGS   | 85AND 01  |
| 2.68             | 0.54  |     | ITNA   | 82GRA 01  | 35.8             | 0.8   |     | TCGS   | 83AND 01  |
| <u>Au (ng/g)</u> |       |     |        |           | <u>Co (ug/g)</u> |       |     |        |           |
| 0.9              | 0.4   |     | ITNA   | 82GRA 01  | 46.1             | 0.5   |     | ITNA   | 85GLA 01  |
| 3.3              | 0.1   |     | ITNA   | 83BOY 01  | 46.6             | 0.9   |     | ITNA   | 84GLA 11  |
| <u>B (ug/g)</u>  |       |     |        |           | 47               | 1     |     | ICPES  | 83CRO 01  |
| <                | 3     |     | OES    | 83MIL 01  | 47.5             | 1.5   |     | ITNA   | 82GRA 01  |
| 0.88             | 0.14  |     | TCGS   | 82GRA 01  | 50               | 3     |     | WXRF   | 85GLA 01  |
| 1.2              | 0.2   |     | TCGS   | 84GLA 01  | 51.9             | 0.5   |     | ITNA   | 83BOY 01  |
| 1.3              | 0.2   |     | TCGS   | 83AND 01  | 55.6             | 1.2   |     | ITNA   | 84GLA 02  |
| 1.5              | 0.2   |     | TCGS   | 85AND 01  | <u>Cr (ug/g)</u> |       |     |        |           |
| <u>Ba (ug/g)</u> |       |     |        |           | 230              | 25    |     | WXRF   | 85GLA 01  |
| 178              | 2     |     | ICPES  | 83CRO 01  | 260              | 20    |     | ICPES  | 83CRO 01  |
| 197              | 33    |     | ITNA   | 82GRA 01  | 322              | 4     |     | ITNA   | 86GAU 01  |
| 200              | 30    |     | ITNA   | 85GLA 01  | 328              | 15    |     | ITNA   | 82GRA 01  |
| 200              | 60    |     | WXRF   | 85GLA 01  | 330              | 4     |     | ITNA   | 85GLA 01  |
| 210              | 30    |     | ITNA   | 84GLA 02  | 330              | 10    |     | ITNA   | 84GLA 02  |
| <u>Be (ng/g)</u> |       |     |        |           | 377              | 4     |     | ITNA   | 83BOY 01  |
| 200              | 50    |     | ICPES  | 83CRO 01  | <u>Cs (ng/g)</u> |       |     |        |           |
| 1200             |       |     | OES    | 83MIL 01  | <                | 400   |     | ITNA   | 84GLA 11  |
| <u>Ca (%)</u>    |       |     |        |           | <                | 600   |     | ITNA   | 83BOY 01  |
| 7.9              | 0.2   |     | TCGS   | 82GRA 01  | 110              | 60    |     | ITNA   | 85GLA 01  |
| 8.2              | 0.6   |     | ITNA   | 82GRA 01  | 210              | 110   |     | ITNA   | 84GLA 02  |
| 8.2              | 0.6   |     | ITNA   | 85GLA 01  | 400              |       |     | ITNA   | 86GAU 01  |
| 8.7              | 0.09  |     | TCGS   | 83AND 01  | <u>Cu (ug/g)</u> |       |     |        |           |
| 8.7              | 0.09  |     | TCGS   | 85AND 01  | 90               | 1     |     | ICPES  | 83CRO 01  |
| 8.75             | 0.02  |     | WXRF   | 85GLA 01  |                  |       |     |        |           |
| 8.82             | 0.02  |     | ICPES  | 83CRO 01  |                  |       |     |        |           |

TABLE 688-2: INDIVIDUAL DATA FOR NBS SRM 688 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Dy (ug/g)</u> |       |     |        |           | <u>Gd (ug/g)</u> |       |     |        |           |
| 3.1              | 0.3   |     | RTNA   | 85GAU 04  | 2.5              |       |     | ITNA   | 82GRA 01  |
| 3.2              | 0.8   |     | ITNA   | 83BOY 01  | 2.82             | 0.08  |     | TCGS   | 82GRA 01  |
| 3.4              | 0.14  |     | FAA    | 84GLA 11  | 2.88             | 0.1   |     | TCGS   | 83AND 01  |
| 3.4              | 0.5   |     | FAA    | 85GAU 04  | 3.3              | 0.5   | 4   | TCGS   | 85GLA 05  |
| 3.53             | 0.17  |     | RTNA   | 84GLA 11  | 3.46             | 0.1   |     | TCGS   | 85AND 01  |
| 3.8              | 0.2   |     | ICPES  | 83CRO 01  | 3.6              | 0.3   |     | ICPES  | 83CRO 01  |
|                  |       |     |        |           | 3.7              | 0.4   | 4   | TCGS   | 85GLA 05  |
| <u>Er (ug/g)</u> |       |     |        |           | <u>H (ug/g)</u>  |       |     |        |           |
| 1.9              | 0.1   |     | ICPES  | 83CRO 01  | 390              | 10    |     | TCGS   | 83AND 01  |
| 2.2              | 0.4   |     | FAA    | 85GAU 04  | 410              | 10    |     | TCGS   | 85AND 01  |
| 2.22             | 0.08  |     | FAA    | 84GLA 11  |                  |       |     |        |           |
| <u>Eu (ug/g)</u> |       |     |        |           | <u>H2O+ (%)</u>  |       |     |        |           |
| 0.919            | 0.048 |     | ITNA   | 82GRA 01  | 0.14             | 0.01  |     | COUL   | 85GLA 01  |
| 0.99             | 0.06  |     | ITNA   | 85GLA 01  |                  |       |     |        |           |
| 1.001            | 0.01  |     | ITNA   | 83BOY 01  |                  |       |     |        |           |
| 1.01             | 0.02  |     | ICPES  | 83CRO 01  |                  |       |     |        |           |
| 1.01             | 0.04  |     | RTNA   | 85GAU 04  |                  |       |     |        |           |
| 1.01             | 0.05  |     | ITNA   | 84GLA 02  |                  |       |     |        |           |
| 1.04             | 0.04  |     | RTNA   | 84GLA 11  |                  |       |     |        |           |
| <u>Fe (%)</u>    |       |     |        |           | <u>Hf (ug/g)</u> |       |     |        |           |
| 7.03             | 0.1   |     | TCGS   | 85AND 01  | 1.46             | 0.13  |     | ITNA   | 84GLA 02  |
| 7.03             | 0.1   |     | TCGS   | 83AND 01  | 1.58             | 0.14  |     | ITNA   | 82GRA 01  |
| 7.1              | 0.06  |     | ITNA   | 84GLA 02  | 1.62             | 0.13  |     | ITNA   | 85GLA 01  |
| 7.19             | 0.02  |     | WXRF   | 85GLA 01  |                  |       |     |        |           |
| 7.19             | 0.17  |     | ITNA   | 85GLA 01  |                  |       |     |        |           |
| 7.23             | 0.17  |     | TCGS   | 82GRA 01  |                  |       |     |        |           |
| 7.23             | 0.19  |     | ITNA   | 82GRA 01  |                  |       |     |        |           |
| 7.34             | 0.03  |     | ICPES  | 83CRO 01  |                  |       |     |        |           |
| 7.82             | 0.08  |     | ITNA   | 83BOY 01  |                  |       |     |        |           |
| <u>FE2O3 (%)</u> |       |     |        |           | <u>Ho (ng/g)</u> |       |     |        |           |
| 1.8              | 0.17  |     | CALC   | 85GLA 01  |                  |       |     |        |           |
|                  |       |     |        |           |                  |       |     |        |           |
| <u>FEO (%)</u>   |       |     |        |           | <u>Ir (ng/g)</u> |       |     |        |           |
| 7.64             |       |     | TITR   | 84GOL 01  |                  |       |     |        |           |
| 7.65             | 0.15  |     | COLOR  | 85GLA 01  |                  |       |     |        |           |
|                  |       |     |        |           |                  |       |     |        |           |
| <u>Ga (ug/g)</u> |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| 17               | 7     |     | ICPES  | 83CRO 01  | 1530             | 60    |     | TCGS   | 83AND 01  |
| 17.7             | 1.1   |     | ITNA   | 83BOY 01  | 1530             | 60    |     | TCGS   | 85AND 01  |
| 57               | 10    |     | ITNA   | 82GRA 01  | 1590             | 75    |     | WXRF   | 85GLA 01  |
|                  |       |     |        |           | 1620             | 30    |     | ICPES  | 83CRO 01  |
|                  |       |     |        |           | 1700             | 100   |     | TCGS   | 82GRA 01  |
|                  |       |     |        |           |                  |       |     |        |           |

TABLE 688-2: INDIVIDUAL DATA FOR NBS SRM 688 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>La (ug/g)</u> |       |     |        |           | <u>Na (%)</u>    |       |     |        |           |
| 4.8              | 0.4   |     | RTNA   | 84GLA 11  | 1.05             | 0.07  |     | TCGS   | 82GRA 01  |
| 4.96             | 0.05  |     | ITNA   | 83BOY 01  | 1.39             | 0.12  |     | ITNA   | 82GRA 01  |
| 5                | 2.5   |     | WXRF   | 85GLA 01  | 1.48             | 0.02  |     | ITNA   | 85GAU 04  |
| 5.3              | 0.1   |     | ICPES  | 83CRO 01  | 1.51             | 0.08  |     | ITNA   | 85GLA 01  |
| 5.3              | 0.3   |     | RTNA   | 85GAU 04  | 1.57             | 0.02  |     | WXRF   | 85GLA 01  |
| 5.9              | 0.2   |     | ITNA   | 84GLA 02  | 1.61             | 0.01  |     | ITNA   | 84GLA 02  |
| 5.9              | 0.6   |     | ITNA   | 85GLA 01  | 1.61             | 0.06  |     | TCGS   | 83AND 01  |
| 7.54             | 0.93  |     | ITNA   | 82GRA 01  | 1.61             | 0.06  |     | TCGS   | 85AND 01  |
|                  |       |     |        |           | 1.63             | 0.05  |     | ICPES  | 83CRO 01  |
| <u>Li (ug/g)</u> |       |     |        |           | <u>Nb (ug/g)</u> |       |     |        |           |
| 7                | 1     |     | ICPES  | 83CRO 01  | 5                | 1     |     | WXRF   | 84KYL 01  |
| <u>Lu (ng/g)</u> |       |     |        |           | 5                | 1     |     | ICPES  | 83CRO 01  |
| 330              | 3     |     | ITNA   | 83BOY 01  | <u>Nd (ug/g)</u> |       |     |        |           |
| 330              | 10    |     | ICPES  | 83CRO 01  | <                | 10    |     | ITNA   | 85GLA 01  |
| 340              | 40    |     | ITNA   | 84GLA 11  | 8.38             | 0.16  |     | ITNA   | 83BOY 01  |
| 342              | 57    |     | ITNA   | 82GRA 01  | 9.95             | 1.08  |     | ITNA   | 82GRA 01  |
| 420              | 60    |     | RTNA   | 84GLA 11  | 10.4             | 0.5   |     | ICPES  | 83CRO 01  |
| <u>Mg (%)</u>    |       |     |        |           | 15               | 1     |     | RTNA   | 84GLA 11  |
| 3.9              | 0.8   |     | ITNA   | 82GRA 01  | <u>Ni (ug/g)</u> |       |     |        |           |
| 5                | 0.12  |     | ITNA   | 85GLA 01  | 123              | 29    |     | ITNA   | 82GRA 01  |
| 5.08             | 0.02  |     | ICPES  | 83CRO 01  | 143              | 2     |     | ICPES  | 83CRO 01  |
| 5.2              |       |     | AA     | 85GAU 04  | 180              | 50    |     | WXRF   | 85GLA 01  |
| 5.22             | 0.02  |     | WXRF   | 85GLA 01  | 186              | 13    |     | ITNA   | 83BOY 01  |
| 5.3              | 0.2   |     | TCGS   | 83AND 01  | <u>P (ug/g)</u>  |       |     |        |           |
| 5.31             | 0.18  |     | TCGS   | 85AND 01  | 560              | 20    |     | ICPES  | 83CRO 01  |
| 5.7              | 0.4   |     | TCGS   | 82GRA 01  | 620              | 20    |     | WXRF   | 85GLA 01  |
| 6.12             | 0.12  |     | IENA   | 85GLA 02  | 930              |       |     | COLOR  | 85GAU 04  |
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Pb (ug/g)</u> |       |     |        |           |
| 1120             | 60    |     | TCGS   | 82GRA 01  | <                | 4     |     | ICPES  | 83CRO 01  |
| 1140             | 30    |     | ITNA   | 85GLA 01  | <u>Pr (ug/g)</u> |       |     |        |           |
| 1180             | 70    |     | ITNA   | 82GRA 01  | 2.4              | 0.6   |     | ICPES  | 83CRO 01  |
| 1220             | 40    |     | WXRF   | 85GLA 01  | <u>Rb (ug/g)</u> |       |     |        |           |
| 1230             | 40    |     | TCGS   | 83AND 01  | <                | 10    |     | ITNA   | 85GLA 01  |
| 1230             | 40    |     | TCGS   | 85AND 01  | 2.18             | 0.26  |     | ITNA   | 83BOY 01  |
| 1240             | 20    |     | ICPES  | 83CRO 01  | 3                | 3     |     | WXRF   | 85GLA 01  |
| 1290             | 60    |     | ITNA   | 84GLA 02  | 32.7             | 1     |     | WXRF   | 84KYL 01  |

TABLE 688-2: INDIVIDUAL DATA FOR NBS SRM 688 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sb (ng/g)</u> |       |     |        |           | <u>Ta (ng/g)</u> |       |     |        |           |
| <                | 200   |     | ITNA   | 85GLA 01  | 246              | 58    |     | ITNA   | 82GRA 01  |
| 87               | 3     |     | ITNA   | 83BOY 01  | 310              | 60    |     | ITNA   | 85GLA 01  |
| 420              |       |     | ITNA   | 84GLA 02  | 380              | 70    |     | ITNA   | 84GLA 02  |
| 466              | 207   |     | ITNA   | 82GRA 01  | <u>Tb (ng/g)</u> |       |     |        |           |
| <u>Sc (ug/g)</u> |       |     |        |           | 462              | 25    |     | ITNA   | 82GRA 01  |
| 35.2             | 0.4   |     | ITNA   | 85GLA 01  | 512              | 10    |     | ITNA   | 83BOY 01  |
| 35.5             | 0.1   |     | ITNA   | 84GLA 11  | 520              | 60    |     | ITNA   | 84GLA 02  |
| 36.1             | 0.9   |     | ITNA   | 82GRA 01  | 535              | 24    |     | RTNA   | 84GLA 11  |
| 36.3             | 0.5   |     | ITNA   | 84GLA 02  | 580              | 50    |     | ITNA   | 85GLA 01  |
| 38.3             | 0.4   |     | ITNA   | 83BOY 01  | <u>Th (ng/g)</u> |       |     |        |           |
| 38.9             | 0.2   |     | ITNA   | 86GAU 01  | 310              | 60    |     | ITNA   | 85GLA 01  |
| 43.3             | 0.5   |     | ICPES  | 83CRO 01  | 320              |       |     | ITNA   | 85GAU 04  |
| <u>Se (ug/g)</u> |       |     |        |           | 460              | 130   |     | ITNA   | 84GLA 02  |
| <                | 3     |     | ITNA   | 83BOY 01  | <u>Ti (ug/g)</u> |       |     |        |           |
| <u>Si (%)</u>    |       |     |        |           | 6900             | 100   |     | TCGS   | 83AND 01  |
| 22.39            | 0.08  |     | TCGS   | 85AND 01  | 6910             | 100   |     | TCGS   | 85AND 01  |
| 22.39            | 0.08  |     | TCGS   | 83AND 01  | 7000             | 700   |     | ITNA   | 82GRA 01  |
| 22.6             |       |     | COLOR  | 85GAU 04  | 7130             | 90    |     | WXRF   | 85GLA 01  |
| 22.69            | 0.15  |     | WXRF   | 85GLA 01  | 7200             | 200   |     | TCGS   | 82GRA 01  |
| 24.6             | 0.6   |     | TCGS   | 82GRA 01  | 7390             | 90    |     | ICPES  | 83CRO 01  |
| <u>Sm (ug/g)</u> |       |     |        |           | <u>Tm (ng/g)</u> |       |     |        |           |
| 2.09             | 0.22  |     | ITNA   | 82GRA 01  | 250              | 60    |     | FAA    | 85GAU 04  |
| 2.29             | 0.03  |     | ITNA   | 83BOY 01  | 264              | 15    |     | FAA    | 84GLA 11  |
| 2.3              | 0.3   |     | ITNA   | 85GLA 01  | 360              | 36    |     | ITNA   | 83BOY 01  |
| 2.31             | 0.08  |     | TCGS   | 82GRA 01  | <u>U (ng/g)</u>  |       |     |        |           |
| 2.35             | 0.02  |     | TCGS   | 83AND 01  | 280              |       |     | DNA    | 84GLA 02  |
| 2.4              | 0.2   | 4   | TCGS   | 85GLA 05  | 310              |       |     | DNA    | 86GAU 01  |
| 2.46             | 0.14  |     | RTNA   | 85GAU 04  | 310              | 40    |     | DNA    | 85GLA 01  |
| 2.5              | 0.2   | 4   | TCGS   | 85GLA 05  | 340              | 80    |     | ITNA   | 82GRA 01  |
| 2.54             | 0.07  |     | ITNA   | 84GLA 02  | <u>V (ug/g)</u>  |       |     |        |           |
| 2.62             | 0.02  |     | TCGS   | 85AND 01  | 235              | 25    |     | ITNA   | 82GRA 01  |
| 2.84             | 0.18  |     | RTNA   | 84GLA 11  | 235              | 40    |     | WXRF   | 85GLA 01  |
| 2.9              | 0.7   |     | ICPES  | 83CRO 01  | 248              | 1     |     | ICPES  | 83CRO 01  |
| <u>Sr (ug/g)</u> |       |     |        |           | 248              | 5     |     | RTNA   | 84GLA 11  |
| 170              | 10    |     | ICPES  | 83CRO 01  |                  |       |     |        |           |
| 170.3            | 1     |     | WXRF   | 84KYL 01  |                  |       |     |        |           |
| 171              | 10    |     | WXRF   | 85GLA 01  |                  |       |     |        |           |
| 179              | 14    |     | IENA   | 84GLA 02  |                  |       |     |        |           |

TABLE 688-2: INDIVIDUAL DATA FOR NBS SRM 688 (cont.)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|
| <u>Y (ug/g)</u>  |              |            |               |                  |
| 14.8             | 1            |            | WXRF          | 84KYL 01         |
| 18               | 4            |            | WXRF          | 85GLA 01         |
| 19.5             | 0.1          |            | ICPES         | 83CRO 01         |
| <u>Yb (ug/g)</u> |              |            |               |                  |
| 1.77             | 0.09         |            | ITNA          | 84GLA 11         |
| 1.86             | 0.27         |            | ITNA          | 82GRA 01         |
| 1.97             | 0.02         |            | FAA           | 84GLA 11         |
| 2.06             | 0.05         |            | ITNA          | 85GLA 01         |
| 2.14             | 0.02         |            | ITNA          | 83BOY 01         |
| 2.2              | 0.03         |            | ICPES         | 83CRO 01         |
| 2.36             | 0.12         |            | RTNA          | 84GLA 11         |
| <u>Zn (ug/g)</u> |              |            |               |                  |
| 73               | 5            |            | WXRF          | 85GLA 01         |
| 79               | 1            |            | ICPES         | 83CRO 01         |
| 90               | 1.8          |            | ITNA          | 83BOY 01         |
| 94               |              |            | AA            | 85GAU 04         |
| <u>Zr (ug/g)</u> |              |            |               |                  |
| 58.6             | 8.7          |            | ITNA          | 82GRA 01         |
| 58.8             | 1            |            | WXRF          | 84KYL 01         |
| 60.8             | 0.3          |            | ITNA          | 83BOY 01         |
| 62               | 2            |            | WXRF          | 85GLA 01         |
| 63               | 4            |            | ICPES         | 83CRO 01         |

TABLE 694-1: COMPILED DATA FOR NBS SRM 694 WESTERN PHOSPHATE ROCK  
(revised 3/1/86)

| ELEMENT | UNITS | NBS   |        |
|---------|-------|-------|--------|
|         |       | Mean  | ± SD   |
| Al      | %     | 0.95  | ± 0.05 |
| Ca      | %     | 31.2  | ± 0.3  |
| Cd      | ug/g  | 131   | ± 26   |
| Cr      | ug/g  | 6980  |        |
| F       | %     | 3.2   | ± 0.1  |
| Fe      | ug/g  | 5520  | ± 420  |
| K       | ug/g  | 4230  | ± 170  |
| Mg      | ug/g  | 1990  | ± 120  |
| Mn      | ug/g  | 90    | ± 9    |
| Na      | ug/g  | 6380  | ± 300  |
| P       | %     | 13.17 | ± 0.04 |
| Si      | %     | 5.23  | ± 0.19 |
| Ti      | ug/g  | 660   |        |
| U       | ug/g  | 141.4 | ± 0.6  |
| V       | ug/g  | 1740  | ± 390  |
| Zn      | ug/g  | 1520  |        |

TABLE 697-1: COMPILED DATA FOR NBS SRM 697 BAUXITE (DOMINICIAN)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS  |        |
|---------|-------|------|--------|
|         |       | Mean | ± SD   |
| Al      | %     | 24.2 | ± 0.1  |
| Ba      | ug/g  | 130  |        |
| Ca      | ug/g  | 5100 | ± 210  |
| Ce      | ug/g  | 690  |        |
| Co      | ug/g  | 13   |        |
| Cr      | ug/g  | 684  | ± 34   |
| Fe      | %     | 14.0 | ± 0.2  |
| Hf      | ug/g  | 14   |        |
| K       | ug/g  | 510  | ± 60   |
| LOI     | %     | 22.1 |        |
| Mg      | ug/g  | 1100 | ± 120  |
| Mn      | ug/g  | 3200 | ± 230  |
| Na      | ug/g  | 270  |        |
| P       | ug/g  | 4200 | ± 260  |
| S       | ug/g  | 520  | ± 120  |
| Sc      | ug/g  | 58   |        |
| Si      | %     | 3.18 | ± 0.03 |
| Ti      | %     | 1.51 | ± 0.03 |
| V       | ug/g  | 350  | ± 30   |
| Zn      | ug/g  | 300  | ± 25   |
| Zr      | ug/g  | 480  | ± 50   |

TABLE 696-1: COMPILED DATA FOR NBS SRM 696 BAUXITE (SURINAM)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS  |        | CONSENSUS |     | RANGE         | METHOD |
|---------|-------|------|--------|-----------|-----|---------------|--------|
|         |       | Mean | ± SD   | Mean      | (n) |               |        |
| Al      | %     | 28.8 | ± 0.2  | 28.43     | (2) | 28.30 - 28.57 | ICPES  |
| Ba      | ug/g  | 36   |        | 31        | (2) | 30.46 - 32.26 | ICPES  |
| Ca      | ug/g  | 130  | ± 15   | 122       | (2) | 115 - 129     | ICPES  |
| Ce      | ug/g  | 41   |        | 38        | (1) | ---           | ---    |
| Co      | ug/g  | 0.9  |        | ---       |     | ---           | ---    |
| Cr      | ug/g  | 320  | ± 30   | 318       | (2) | 314 - 321     | ICPES  |
| Fe      | %     | 6.08 | ± 0.07 | 6.04      | (2) | 6.01 - 6.07   | ICPES  |
| Hf      | ug/g  | 32   |        | 29        | (2) | 28 - 30       | ICPES  |
| K       | ug/g  | 75   | ± 25   | ---       |     | ---           | ---    |
| LOI     | %     | 29.9 | ± 0.2  | ---       |     | ---           | ---    |
| Mg      | ug/g  | 72   | ± 18   | 63.3      | (2) | 60.30 - 66.33 | ICPES  |
| Mn      | ug/g  | 31   | ± 8    | 28.2      | (2) | 27.09 - 29.41 | ICPES  |
| Na      | ug/g  | 52   |        | ---       |     | ---           | ---    |
| P       | ug/g  | 220  | ± 30   | 209       | (2) | 192 - 227     | ICPES  |
| S       | ug/g  | 840  | ± 120  | ---       |     | ---           | ---    |
| Sc      | ug/g  | 8    |        | 8         | (2) | 7 - 9         | ICPES  |
| Si      | %     | 1.77 | ± 0.05 | 1.76      | (2) | 1.76 - 1.76   | ICPES  |
| Ti      | %     | 1.58 | ± 0.03 | 1.56      | (2) | 1.55 - 1.58   | ICPES  |
| V       | ug/g  | 400  | ± 30   | 398       | (2) | 398 - 398     | ICPES  |
| Zn      | ug/g  | 11   | ± 6    | 12.8      | (1) | ---           | ICPES  |
| Zr      | ug/g  | 1040 | ± 150  | 1003      | (2) | 992 - 1014    | ICPES  |

TABLE 696-2: INDIVIDUAL DATA FOR NBS SRM 696 (revised 3/1/86)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> | <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|------------------|--------------|------------|---------------|------------------|
| <u>Al (%)</u>    |              |            |               |                  | <u>Mn (ug/g)</u> |              |            |               |                  |
| 28.3015          | 0.4232       | 11         | ICPES         | 83BAR 02         | 27.09            | 1.548        | 11         | ICPES         | 83BAR 02         |
| 28.566           | 0.4232       | 11         | ICPES         | 83BAR 02         | 29.412           | 15.48        | 11         | ICPES         | 83BAR 02         |
| <u>Ba (ug/g)</u> |              |            |               |                  | <u>P (ug/g)</u>  |              |            |               |                  |
| 30.464           | 1.792        | 11         | ICPES         | 83BAR 02         | 191.84           | 4.36         | 11         | ICPES         | 83BAR 02         |
| 32.256           | 2.688        | 11         | ICPES         | 83BAR 02         | 226.72           | 4.36         | 11         | ICPES         | 83BAR 02         |
| <u>Ca (ug/g)</u> |              |            |               |                  | <u>Sc (ug/g)</u> |              |            |               |                  |
| 115              | 1.4          | 11         | ICPES         | 83BAR 02         | 7                | 1            | 11         | ICPES         | 83BAR 02         |
| 129              | 2            | 11         | ICPES         | 83BAR 02         | 9                | 1            | 11         | ICPES         | 83BAR 02         |
| <u>Ce (ug/g)</u> |              |            |               |                  | <u>Si (%)</u>    |              |            |               |                  |
| 38               | 2            | 11         | ICPES         | 83BAR 02         | 1.7559           | 0.0234       | 11         | ICPES         | 83BAR 02         |
|                  |              |            |               |                  | 1.7559           | 0.028        | 11         | ICPES         | 83BAR 02         |
| <u>Cr (ug/g)</u> |              |            |               |                  | <u>Ti (%)</u>    |              |            |               |                  |
| 314.64           | 6.84         | 11         | ICPES         | 83BAR 02         | 1.5514           | 0.024        | 11         | ICPES         | 83BAR 02         |
| 321.48           | 6.84         | 11         | ICPES         | 83BAR 02         | 1.5754           | 0.03         | 11         | ICPES         | 83BAR 02         |
| <u>Fe (%)</u>    |              |            |               |                  | <u>V (ug/g)</u>  |              |            |               |                  |
| 6.0114           | 0.0699       | 11         | ICPES         | 83BAR 02         | 397.6            | 5.6          | 11         | ICPES         | 83BAR 02         |
| 6.0743           | 0.0629       | 11         | ICPES         | 83BAR 02         | 397.6            | 5.6          | 11         | ICPES         | 83BAR 02         |
| <u>Hf (ug/g)</u> |              |            |               |                  | <u>Zn (ug/g)</u> |              |            |               |                  |
| 28               | 2            | 11         | ICPES         | 83BAR 02         | 12.848           | 0.803        | 11         | ICPES         | 83BAR 02         |
| 30               | 2            | 11         | ICPES         | 83BAR 02         |                  |              |            |               |                  |
| <u>Mg (ug/g)</u> |              |            |               |                  | <u>Zr (ug/g)</u> |              |            |               |                  |
| 60.3             | 6.03         | 11         | ICPES         | 83BAR 02         | 992              | 15           | 11         | ICPES         | 83BAR 02         |
| 66.33            | 1.206        | 11         | ICPES         | 83BAR 02         | 1013.8           | 22.2         | 11         | ICPES         | 83BAR 02         |

TABLE 698-1: COMPILED DATA FOR NBS SRM 698 BAUXITE (JAMAICAN)  
(revised 3/1/86)

| ELEMENT | UNITS | NBS             | CONSENSUS |     | RANGE         | METHOD |
|---------|-------|-----------------|-----------|-----|---------------|--------|
|         |       | Mean $\pm$ SD   | Mean      | (n) |               |        |
| Al      | %     | 25.5 $\pm$ 0.2  | 25.10     | (2) | 25.02 - 25.18 | ICPES  |
| Ba      | ug/g  | 72              | 68        | (2) | 68 - 68       | ICPES  |
| Ca      | ug/g  | 4400 $\pm$ 140  | 4400      | (2) | 4390 - 4404   | ICPES  |
| Ce      | ug/g  | 300             | 300       | (2) | 291 - 310     | ICPES  |
| Co      | ug/g  | 45              | 45        | (2) | 43 - 47       | ICPES  |
| Cr      | ug/g  | 550 $\pm$ 40    | 527       | (2) | 527 - 527     | ICPES  |
| Fe      | %     | 13.7 $\pm$ 0.1  | 13.6      | (2) | 13.35 - 13.91 | ICPES  |
| Hf      | ug/g  | 15              | 13        | (1) | ---           | ---    |
| K       | ug/g  | 83 $\pm$ 17     | ---       |     | ---           | ---    |
| LOI     | %     | 27.3            | ---       |     | ---           | ---    |
| Mg      | ug/g  | 350 $\pm$ 50    | 332       | (2) | 332 - 332     | ICPES  |
| Mn      | ug/g  | 2900 $\pm$ 230  | 2875      | (2) | 2872 - 2879   | ICPES  |
| Na      | ug/g  | 110             | ---       |     | ---           | ---    |
| P       | ug/g  | 1600 $\pm$ 40   | 1585      | (2) | 1570 - 1600   | ICPES  |
| S       | ug/g  | 880 $\pm$ 120   | ---       |     | ---           | ---    |
| Sc      | ug/g  | 51              | 48        | (2) | 46 - 50       | ICPES  |
| Si      | ug/g  | 3200 $\pm$ 140  | 3180      | (2) | 3129 - 3232   | ICPES  |
| Ti      | %     | 1.42 $\pm$ 0.04 | 1.40      | (2) | 1.39 - 1.40   | ICPES  |
| V       | ug/g  | 360 $\pm$ 10    | 347       | (2) | 342 - 353     | ICPES  |
| Zn      | ug/g  | 230 $\pm$ 20    | 221       | (2) | 217 - 225     | ICPES  |
| Zr      | ug/g  | 450 $\pm$ 70    | 429.6     | (2) | 429.2 - 429.9 | ICPES  |

TABLE 698-2: INDIVIDUAL DATA FOR NBS SRM 698 (revised 3/1/86)

| Conc             | Uncer  | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|--------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (%)</u>    |        |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 25.0217          | 0.3703 | 11  | ICPES  | 83BAR 02  | 2871.54          | 46.44 | 11  | ICPES  | 83BAR 02  |
| 25.1804          | 0.3703 | 11  | ICPES  | 83BAR 02  | 2879.28          | 38.7  | 11  | ICPES  | 83BAR 02  |
| <u>Ba (ug/g)</u> |        |     |        |           | <u>P (ug/g)</u>  |       |     |        |           |
| 68.096           | 2.688  | 11  | ICPES  | 83BAR 02  | 1569.6           | 21.8  | 11  | ICPES  | 83BAR 02  |
| 68.096           | 3.584  | 11  | ICPES  | 83BAR 02  | 1600.12          | 26.16 | 11  | ICPES  | 83BAR 02  |
| <u>Ca (ug/g)</u> |        |     |        |           | <u>Sc (ug/g)</u> |       |     |        |           |
| 4390.1           | 57.2   | 11  | ICPES  | 83BAR 02  | 46               | 3     | 11  | ICPES  | 83BAR 02  |
| 4404.4           | 64.35  | 11  | ICPES  | 83BAR 02  | 50               | 2     | 11  | ICPES  | 83BAR 02  |
| <u>Ce (ug/g)</u> |        |     |        |           | <u>Si (ug/g)</u> |       |     |        |           |
| 291              | 5      | 11  | ICPES  | 83BAR 02  | 3128.9           | 46.7  | 11  | ICPES  | 83BAR 02  |
| 310              | 10     | 11  | ICPES  | 83BAR 02  | 3231.64          | 42.03 | 11  | ICPES  | 83BAR 02  |
| <u>Co (ug/g)</u> |        |     |        |           | <u>Ti (%)</u>    |       |     |        |           |
| 43               | 2      | 11  | ICPES  | 83BAR 02  | 1.3897           | 0.024 | 11  | ICPES  | 83BAR 02  |
| 47               | 3      | 11  | ICPES  | 83BAR 02  | 1.4017           | 0.018 | 11  | ICPES  | 83BAR 02  |
| <u>Cr (ug/g)</u> |        |     |        |           | <u>V (ug/g)</u>  |       |     |        |           |
| 526.68           | 6.84   | 11  | ICPES  | 83BAR 02  | 341.6            | 5.6   | 11  | ICPES  | 83BAR 02  |
| 526.68           | 6.84   | 11  | ICPES  | 83BAR 02  | 352.8            | 5.6   | 11  | ICPES  | 83BAR 02  |
| <u>Fe (%)</u>    |        |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 13.3509          | 0.2097 | 11  | ICPES  | 83BAR 02  | 216.81           | 8.03  | 11  | ICPES  | 83BAR 02  |
| 13.9101          | 0.2796 | 11  | ICPES  | 83BAR 02  | 224.84           | 4.015 | 11  | ICPES  | 83BAR 02  |
| <u>Hf (ug/g)</u> |        |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
| 13               | 1      | 11  | ICPES  | 83BAR 02  | 429.2            | 7.4   | 11  | ICPES  | 83BAR 02  |
|                  |        |     |        |           | 429.94           | 5.18  | 11  | ICPES  | 83BAR 02  |
| <u>Mg (ug/g)</u> |        |     |        |           |                  |       |     |        |           |
| 331.65           | 6.03   | 11  | ICPES  | 83BAR 02  |                  |       |     |        |           |
| 331.65           | 30.15  | 11  | ICPES  | 83BAR 02  |                  |       |     |        |           |

TABLE 1083-1: COMPILED DATA FOR NBS SRM 1083 WEAR METALS IN LUBRICATING OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean |
|---------|-------|-------------|
| Ag      | ng/g  | < 50        |
| Al      | ug/g  | < 0.5       |
| Cd      | ng/g  | < 40        |
| Cl      | ug/g  | 1.7         |
| Co      | ng/g  | < 10        |
| Cr      | ng/g  | < 20        |
| Cu      | ng/g  | < 500       |
| Fe      | ug/g  | < 1         |
| Mg      | ng/g  | < 100       |
| Mn      | ng/g  | < 5         |
| Mo      | ng/g  | < 10        |
| Na      | ng/g  | < 60        |
| Ni      | ng/g  | < 400       |
| Pb      | ng/g  | < 40        |
| S       | ug/g  | 980         |
| Si      | ug/g  | < 1         |
| Sn      | ng/g  | < 400       |
| Ti      | ug/g  | < 5         |
| V       | ng/g  | < 300       |
| Zn      | ng/g  | < 80        |

TABLE 1084-1: COMPILED DATA FOR NBS SRM 1084 WEAR METALS IN LUBRICATING OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS           | CONSENSUS          | MEDIAN | RANGE     | METHOD |
|---------|-------|---------------|--------------------|--------|-----------|--------|
|         |       | Mean $\pm$ SD | Mean $\pm$ SD (n)  |        |           |        |
| Ag      | ug/g  | 101           | 95.7 $\pm$ 1.5 (3) | 96     | 94 - 97   | ICPES  |
| Al      | ug/g  | 98 $\pm$ 2    | 98 $\pm$ 6 (3)     | 100    | 92 - 103  | ICPES  |
| Cd      | ng/g  | < 40          | ---                | ---    | ---       | ---    |
| Cl      | ug/g  | 1.7           | ---                | ---    | ---       | ---    |
| Co      | ng/g  | < 10          | ---                | ---    | ---       | ---    |
| Cr      | ug/g  | 100 $\pm$ 3   | 101 $\pm$ 1 (3)    | 101    | 100 - 102 | ICPES  |
| Cu      | ug/g  | 98 $\pm$ 4    | 99 $\pm$ 2 (3)     | 99     | 96 - 101  | ICPES  |
| Fe      | ug/g  | 100 $\pm$ 3   | 98.7 $\pm$ 0.6 (3) | 99     | 98 - 99   | ICPES  |
| Mg      | ug/g  | 98 $\pm$ 4    | 95 $\pm$ 3 (3)     | 96     | 92 - 97   | ICPES  |
| Mn      | ng/g  | < 5           | ---                | ---    | ---       | ---    |
| Mo      | ug/g  | 97 $\pm$ 5    | 97 $\pm$ 2 (3)     | 97     | 94 - 99   | ICPES  |
| Na      | ng/g  | < 60          | ---                | ---    | ---       | ---    |
| Ni      | ug/g  | 101 $\pm$ 4   | 97 $\pm$ 4 (3)     | 98     | 93 - 101  | ICPES  |
| Pb      | ug/g  | 101           | 98 $\pm$ 2 (3)     | 97     | 96 - 100  | ICPES  |
| S       | ug/g  | 2237          | ---                | ---    | ---       | ---    |
| Si      | ug/g  | 102           | ---                | ---    | ---       | ---    |
| Sn      | ug/g  | 102 $\pm$ 6   | ---                | ---    | ---       | ---    |
| Ti      | ug/g  | 99 $\pm$ 5    | 100 $\pm$ 2 (3)    | 101    | 98 - 102  | ICPES  |
| V       | ng/g  | < 300         | ---                | ---    | ---       | ---    |
| Zn      | ng/g  | < 80          | ---                | ---    | ---       | ---    |

TABLE 1084-2: INDIVIDUAL DATA FOR NBS SRM 1084 (revised 3/1/86)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> | <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|------------------|--------------|------------|---------------|------------------|
| <u>Ag (ug/g)</u> |              |            |               |                  | <u>Mg (ug/g)</u> |              |            |               |                  |
| 94               | 2            | 11         | ICPES         | 84BAR 03         | 92               | 2            | 11         | ICPES         | 84BAR 03         |
| 96               | 5            | 11         | ICPES         | 84BAR 03         | 96               | 2            | 11         | ICPES         | 84BAR 03         |
| 97               | 1            | 11         | ICPES         | 84BAR 03         | 97               | 2            | 11         | ICPES         | 84BAR 03         |
| <u>Al (ug/g)</u> |              |            |               |                  | <u>Mo (ug/g)</u> |              |            |               |                  |
| 92               | 5            | 11         | ICPES         | 84BAR 03         | 94               | 3            | 11         | ICPES         | 84BAR 03         |
| 100              | 3            | 11         | ICPES         | 84BAR 03         | 97               | 3            | 11         | ICPES         | 84BAR 03         |
| 103              | 7            | 11         | ICPES         | 84BAR 03         | 99               | 4            | 11         | ICPES         | 84BAR 03         |
| <u>Cr (ug/g)</u> |              |            |               |                  | <u>Ni (ug/g)</u> |              |            |               |                  |
| 100              | 1            | 11         | ICPES         | 84BAR 03         | 93               | 3            | 11         | ICPES         | 84BAR 03         |
| 101              | 3            | 11         | ICPES         | 84BAR 03         | 98               | 4            | 11         | ICPES         | 84BAR 03         |
| 102              | 5            | 11         | ICPES         | 84BAR 03         | 101              | 5            | 11         | ICPES         | 84BAR 03         |
| <u>Cu (ug/g)</u> |              |            |               |                  | <u>Pb (ug/g)</u> |              |            |               |                  |
| 96               | 3            | 11         | ICPES         | 84BAR 03         | 96               | 4            | 11         | ICPES         | 84BAR 03         |
| 99               | 4            | 11         | ICPES         | 84BAR 03         | 97               | 2            | 11         | ICPES         | 84BAR 03         |
| 101              | 3            | 11         | ICPES         | 84BAR 03         | 100              | 3            | 11         | ICPES         | 84BAR 03         |
| <u>Fe (ug/g)</u> |              |            |               |                  | <u>Ti (ug/g)</u> |              |            |               |                  |
| 98               | 4            | 11         | ICPES         | 84BAR 03         | 98               | 2            | 11         | ICPES         | 84BAR 03         |
| 99               | 2            | 11         | ICPES         | 84BAR 03         | 101              | 7            | 11         | ICPES         | 84BAR 03         |
| 99               | 2            | 11         | ICPES         | 84BAR 03         | 102              | 2            | 11         | ICPES         | 84BAR 03         |

TABLE 1085-1: COMPILED DATA FOR NBS SRM 1085 WEAR METALS IN LUBRICATING OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS           | CONSENSUS           | MEDIAN | RANGE     | METHOD |
|---------|-------|---------------|---------------------|--------|-----------|--------|
|         |       | Mean $\pm$ SD | Mean $\pm$ SD (n)   |        |           |        |
| Ag      | ug/g  | 291           | 300 $\pm$ 6 (3)     | 303    | 293 - 305 | ICPES  |
| Al      | ug/g  | 296 $\pm$ 4   | 303 $\pm$ 6 (3)     | 303    | 297 - 309 | ICPES  |
| Cd      | ng/g  | < 40          | ---                 | ---    | ---       | ---    |
| Cl      | ug/g  | 1.7           | ---                 | ---    | ---       | ---    |
| Co      | ng/g  | < 10          | ---                 | ---    | ---       | ---    |
| Cr      | ug/g  | 298 $\pm$ 5   | 302 $\pm$ 8 (3)     | 304    | 294 - 309 | ICPES  |
| Cu      | ug/g  | 295 $\pm$ 10  | 302 $\pm$ 2 (3)     | 302    | 299 - 304 | ICPES  |
| Fe      | ug/g  | 300 $\pm$ 4   | 303.3 $\pm$ 1.5 (3) | 303    | 302 - 305 | ICPES  |
| Mg      | ug/g  | 297 $\pm$ 3   | 300 $\pm$ 5 (3)     | 302    | 295 - 304 | ICPES  |
| Mn      | ng/g  | < 5           | ---                 | ---    | ---       | ---    |
| Mo      | ug/g  | 292 $\pm$ 11  | 293 $\pm$ 4 (3)     | 292    | 290 - 298 | ICPES  |
| Na      | ng/g  | < 60          | ---                 | ---    | ---       | ---    |
| Ni      | ug/g  | 303 $\pm$ 7   | 300 $\pm$ 10 (3)    | 303    | 288 - 308 | ICPES  |
| Pb      | ug/g  | 305           | 300.3 $\pm$ 1.2 (3) | 301    | 299 - 301 | ICPES  |
| S       | ug/g  | 4806          | ---                 | ---    | ---       | ---    |
| Si      | ug/g  | 308           | ---                 | ---    | ---       | ---    |
| Sn      | ug/g  | 296 $\pm$ 12  | ---                 | ---    | ---       | ---    |
| Ti      | ug/g  | 300 $\pm$ 4   | ---                 | ---    | ---       | ---    |
| V       | ng/g  | < 300         | ---                 | ---    | ---       | ---    |
| Zn      | ng/g  | < 80          | ---                 | ---    | ---       | ---    |

TABLE 1085-2: INDIVIDUAL DATA FOR NBS SRM 1085 (revised 3/1/86)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> | <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|------------------|--------------|------------|---------------|------------------|
| <u>Ag (ug/g)</u> |              |            |               |                  | <u>Fe (ug/g)</u> |              |            |               |                  |
| 293              | 5            | 11         | ICPES         | 84BAR 03         | 302              | 5            | 11         | ICPES         | 84BAR 03         |
| 303              | 7            | 11         | ICPES         | 84BAR 03         | 303              | 5            | 11         | ICPES         | 84BAR 03         |
| 305              | 5            | 11         | ICPES         | 84BAR 03         | 305              | 10           | 11         | ICPES         | 84BAR 03         |
| <u>Al (ug/g)</u> |              |            |               |                  | <u>Mg (ug/g)</u> |              |            |               |                  |
| 297              | 7            | 11         | ICPES         | 84BAR 03         | 295              | 8            | 11         | ICPES         | 84BAR 03         |
| 303              | 7            | 11         | ICPES         | 84BAR 03         | 302              | 10           | 11         | ICPES         | 84BAR 03         |
| 309              | 8            | 11         | ICPES         | 84BAR 03         | 304              | 8            | 11         | ICPES         | 84BAR 03         |
| <u>Cr (ug/g)</u> |              |            |               |                  | <u>Mo (ug/g)</u> |              |            |               |                  |
| 294              | 4            | 11         | ICPES         | 84BAR 03         | 290              | 10           | 11         | ICPES         | 84BAR 03         |
| 304              | 3            | 11         | ICPES         | 84BAR 03         | 292              | 4            | 11         | ICPES         | 84BAR 03         |
| 309              | 6            | 11         | ICPES         | 84BAR 03         | 298              | 7            | 11         | ICPES         | 84BAR 03         |
| <u>Cu (ug/g)</u> |              |            |               |                  | <u>Ni (ug/g)</u> |              |            |               |                  |
| 299              | 5            | 11         | ICPES         | 84BAR 03         | 288              | 7            | 11         | ICPES         | 84BAR 03         |
| 302              | 6            | 11         | ICPES         | 84BAR 03         | 303              | 5            | 11         | ICPES         | 84BAR 03         |
| 304              | 7            | 11         | ICPES         | 84BAR 03         | 308              | 5            | 11         | ICPES         | 84BAR 03         |
|                  |              |            |               |                  | <u>Pb (ug/g)</u> |              |            |               |                  |
|                  |              |            |               |                  | 299              | 10           | 11         | ICPES         | 84BAR 03         |
|                  |              |            |               |                  | 301              | 6            | 11         | ICPES         | 84BAR 03         |
|                  |              |            |               |                  | 301              | 6            | 11         | ICPES         | 84BAR 03         |

TABLE 1549-1: COMPILED COMPOSITION DATA FOR NBS SRM 1549 MILK POWDER (revised 3/1/86)

| ELEMENT | UNITS | NBS         |    | CONSENSUS |     | RANGE       | METHOD |
|---------|-------|-------------|----|-----------|-----|-------------|--------|
|         |       | Mean        | SD | Mean      | (n) |             |        |
| Ag      | ng/g  | < 0.3       |    | < 0.3     |     | ---         | NAA    |
| Al      | ug/g  | 2           |    | < 3       |     | ---         | NAA    |
| As      | ng/g  | 1.9         |    | 1.77      | (1) | ---         | NAA    |
| Br      | ug/g  | 12          |    | 11.85     | (2) | 11.6 - 12.1 | NAA    |
| Ca      | %     | 1.3 ± 0.05  |    | 1.263     | (2) | 1.2 - 1.326 | NAA    |
| Cd      | ng/g  | 0.5 ± 0.2   |    | 0.47      | (1) | ---         | NAA    |
| Cl      | %     | 1.09 ± 0.02 |    | 1.085     | (1) | ---         | NAA    |
| Co      | ng/g  | 4.1         |    | 4.12      | (1) | ---         | NAA    |
| Cr      | ng/g  | 2.6 ± 0.7   |    | 2.5       | (1) | ---         | NAA    |
| Cs      | ng/g  | ---         |    | 17.6      | (1) | ---         | NAA    |
| Cu      | ng/g  | 700 ± 100   |    | 628       | (2) | 606 - 650   | NAA    |
| F       | ng/g  | 200         |    | ---       |     | ---         | ---    |
| Fe      | ug/g  | 2.1         |    | 2.03      | (2) | 1.76 - 2.3  | NAA    |
| H2O     | %     | ---         |    | 3.6       | (1) | ---         | ---    |
| Hg      | ng/g  | 0.3 ± 0.2   |    | 0.16      | (1) | ---         | NAA    |
| I       | ug/g  | 3.38 ± 0.02 |    | 3.2       | (1) | ---         | NAA    |
| K       | %     | 1.69 ± 0.03 |    | 1.735     | (2) | 1.69 - 1.78 | NAA    |
| Mg      | ug/g  | 1200 ± 30   |    | 1190      | (1) | ---         | NAA    |
| Mn      | ng/g  | 260 ± 60    |    | 281.5     | (2) | 233 - 330   | NAA    |
| Mo      | ng/g  | 340         |    | 332       | (2) | 322 - 342   | NAA    |
| N       | %     | ---         |    | 5.61      | (1) | ---         | ---    |
| Na      | ug/g  | 4970 ± 100  |    | 4890      | (1) | ---         | NAA    |
| Ni      | ng/g  | ---         |    | 240       | (1) | ---         | ---    |
| P       | %     | 1.05        |    | ---       |     | ---         | ---    |
| Pb      | ng/g  | 19 ± 3      |    | < 100     |     | ---         | ---    |
| Rb      | ug/g  | 11          |    | 12.75     | (2) | 12.4 - 13.1 | NAA    |
| S       | ug/g  | 3510 ± 50   |    | 3514      | (1) | ---         | IDMS   |
| S-32/34 | ratio | ---         |    | 22.624    | (1) | ---         | IDMS   |
| S-33/34 | ratio | ---         |    | 0.1779    | (1) | ---         | IDMS   |
| Sb      | ng/g  | 0.27        |    | 0.25      | (1) | ---         | NAA    |
| Sc      | ng/g  | ---         |    | 0.94      | (1) | ---         | NAA    |
| Se      | ng/g  | 110 ± 10    |    | 100       | (2) | 90 - 110    | NAA    |
| Si      | ug/g  | < 50        |    | ---       |     | ---         | ---    |
| Sn      | ng/g  | < 500       |    | 1.9       | (1) | ---         | NAA    |
| Sr      | ug/g  | ---         |    | 3.69      | (1) | ---         | ---    |
| U       | ng/g  | ---         |    | < 1       |     | ---         | NAA    |
| W       | ng/g  | ---         |    | 0.43      | (1) | ---         | NAA    |
| Zn      | ug/g  | 46.1 ± 2.2  |    | 46.75     | (2) | 46.6 - 46.9 | NAA    |

| COMPOUND            | CAS # | UNITS | NBS Mean | CONSENSUS Mean (n) |
|---------------------|-------|-------|----------|--------------------|
| Total Folates       | ---   | ug/g  | ---      | 0.64 (1)           |
| Total Pantothenates | ---   | ug/g  | ---      | 45.2 (1)           |
| Thiamine            | ---   | ug/g  | ---      | 4.5 (1)            |
| Protein             | ---   | %     | ---      | 35.8 (1)           |
| Lactose             | ---   | %     | 47       | ---                |
| l-Ascorbic acid     | 50817 | ug/g  | 53       | 43.4 (1)           |
| Niacin              | 59676 | ug/g  | ---      | 9.8 (1)            |
| Vitamin B6          | 65236 | ug/g  | ---      | 4.8 (1)            |
| Riboflavin          | 83885 | ug/g  | ---      | 15 (1)             |

TABLE 1549-2: INDIVIDUAL DATA FOR NBS SRM 1549 (revised 3/1/86)

| Conc                              | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-----------------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Total Folates (ug/g)</u>       |       |     |        |           | <u>Ca (%)</u>    |       |     |        |           |
| 0.64                              |       |     | VV     | 85TAN 01  | 1.2              | 0.08  |     | XRF    | 86GIA 01  |
|                                   |       |     |        |           | 1.326            | 0.026 |     | ITNA   | 86GRE 01  |
| <u>Total Pantothenates (ug/g)</u> |       |     |        |           | <u>Cd (ng/g)</u> |       |     |        |           |
| 45.2                              |       |     | VV     | 85TAN 01  | 0.47             | 0.09  |     | RTNA   | 86GRE 01  |
| <u>Thiamine (ug/g)</u>            |       |     |        |           | <u>Cl (%)</u>    |       |     |        |           |
| 4.5                               |       |     | VV     | 85TAN 01  | 1.085            | 0.014 |     | ITNA   | 86GRE 01  |
| <u>Protein (%)</u>                |       |     |        |           | <u>Co (ng/g)</u> |       |     |        |           |
| 35.8                              |       |     | VV     | 85TAN 01  | 4.12             | 0.27  |     | ITNA   | 86GRE 01  |
| <u>L-Ascorbic acid (ug/g)</u>     |       |     |        |           | <u>Cr (ng/g)</u> |       |     |        |           |
| 43.4                              |       |     | VV     | 85TAN 01  | <                | 600   | L   | XRF    | 86GIA 01  |
| <u>Niacin (ug/g)</u>              |       |     |        |           | <u>Cs (ng/g)</u> |       |     |        |           |
| 9.8                               |       |     | VV     | 85TAN 01  | 2.5              | 0.6   |     | RTNA   | 86GRE 01  |
| <u>Vitamin B6 (ug/g)</u>          |       |     |        |           | <u>Cu (ng/g)</u> |       |     |        |           |
| 4.8                               |       |     | VV     | 85TAN 01  | 17.6             | 0.7   |     | ITNA   | 86GRE 01  |
| <u>Riboflavin (ug/g)</u>          |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| 15                                |       |     | VV     | 85TAN 01  | 606              | 10    |     | RTNA   | 86GRE 01  |
| <u>Ag (ng/g)</u>                  |       |     |        |           | <u>H2O (%)</u>   |       |     |        |           |
| <                                 | 0.3   |     | RTNA   | 86GRE 01  | 650              | 40    |     | XRF    | 86GIA 01  |
| <u>Al (ug/g)</u>                  |       |     |        |           | <u>Hg (ng/g)</u> |       |     |        |           |
| <                                 | 3     |     | RTNA   | 86GRE 01  | <                | 100   | L   | XRF    | 86GIA 01  |
| <u>As (ng/g)</u>                  |       |     |        |           | <u>I (ug/g)</u>  |       |     |        |           |
| <                                 | 50    | L   | XRF    | 86GIA 01  | 0.16             | 0.015 |     | RTNA   | 86GRE 01  |
| 1.77                              | 0.11  |     | RTNA   | 86GRE 01  | <u>K (%)</u>     |       |     |        |           |
| <u>Br (ug/g)</u>                  |       |     |        |           | <u>Ag (ng/g)</u> |       |     |        |           |
| 11.6                              | 0.04  |     | ITNA   | 86GRE 01  | 1.76             | 0.13  |     | ITNA   | 86GRE 01  |
| 12.1                              | 0.2   |     | XRF    | 86GIA 01  | 2.3              | 0.16  |     | XRF    | 86GIA 01  |

TABLE 1549-2: INDIVIDUAL DATA FOR NBS SRM 1549 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Mg (ug/g)</u> |       |     |        |           | <u>S-32/34 (ratio)</u> |       |     |        |           |
| 1190             | 30    |     | ITNA   | 86GRE 01  | 22.624                 |       |     | IDMS   | 84KEL 01  |
| <u>Mn (ng/g)</u> |       |     |        |           | <u>S-33/34 (ratio)</u> |       |     |        |           |
| 233              | 13    |     | ITNA   | 86GRE 01  | 0.1779                 |       |     | IDMS   | 84KEL 01  |
| 330              | 120   |     | XRF    | 86GIA 01  |                        |       |     |        |           |
| <u>Mo (ng/g)</u> |       |     |        |           | <u>Sb (ng/g)</u>       |       |     |        |           |
| 322              | 17    |     | RTNA   | 86GRE 01  | 0.25                   | 0.03  |     | RTNA   | 86GRE 01  |
| 342              | 10    |     | RTNA   | 84BYR 01  | <u>Sc (ng/g)</u>       |       |     |        |           |
| <u>N (%)</u>     |       |     |        |           | 0.94                   |       |     |        |           |
| 5.61             |       |     | VV     | 85TAN 01  | <u>Se (ng/g)</u>       |       |     |        |           |
| <u>Na (ug/g)</u> |       |     |        |           | 90                     |       |     |        |           |
| 4890             | 60    |     | ITNA   | 86GRE 01  | 110                    | 40    |     | XRF    | 86GIA 01  |
| <u>Ni (ng/g)</u> |       |     |        |           | 3                      |       |     |        |           |
| 240              | 60    |     | XRF    | 86GIA 01  | <u>Sn (ng/g)</u>       |       |     |        |           |
| <u>Pb (ng/g)</u> |       |     |        |           | 1.9                    |       |     |        |           |
| <                | 100   | L   | XRF    | 86GIA 01  | <u>Sr (ug/g)</u>       |       |     |        |           |
| <u>Rb (ug/g)</u> |       |     |        |           | 3.69                   |       |     |        |           |
| 12.4             | 0.4   |     | ITNA   | 86GRE 01  | <u>U (ng/g)</u>        |       |     |        |           |
| 13.1             | 0.2   |     | XRF    | 86GIA 01  | <                      | 1     |     | DNA    | 86GAU 01  |
| <u>S (ug/g)</u>  |       |     |        |           | <u>W (ng/g)</u>        |       |     |        |           |
| 3514             | 29    |     | IDMS   | 84KEL 01  | 0.43                   | 0.03  |     | RTNA   | 84BYR 01  |
| <u>Zn (ug/g)</u> |       |     |        |           | 46.6                   |       |     |        |           |
|                  |       |     |        |           | 46.9                   | 1.2   |     | ITNA   | 86GRE 01  |
|                  |       |     |        |           |                        | 0.9   |     | XRF    | 86GIA 01  |

TABLE 1566-1: COMPILED DATA FOR NBS SRM 1566 OYSTER TISSUE (revised 3/1/86)

| ELE  | UNITS | NBS           | CONSENSUS   |      | MEDIAN | RANGE       | AA          |     | NAA         |     | ICPES       |          | OTHER METHODS |                        |
|------|-------|---------------|-------------|------|--------|-------------|-------------|-----|-------------|-----|-------------|----------|---------------|------------------------|
|      |       |               | Mean ± SD   | (n)  |        |             | Mean ± SD   | (n) | Mean ± SD   | (n) | Mean ± SD   | (n)      | Mean          | (n) Method             |
| Ag   | ug/g  | 0.89 ± 0.09   | 0.94 ± 0.11 | (5)  | 0.89   | 0.86 - 1.14 | 0.89        | (1) | 0.95 ± 0.13 | (4) | ---         | ---      | ---           | ---                    |
| Al   | ug/g  | ---           | 255 ± 23    | (5)  | 252    | 231 - 291   | 231         | (1) | 252 ± 12    | (3) | 291         | (1)      | ---           | ---                    |
| As   | ug/g  | 13.4 ± 1.9    | 13.0 ± 1.2  | (17) | 13     | 11.1 - 15.5 | 13.5 ± 1.0  | (7) | 13.1 ± 1.6  | (8) | 12.7 ± 1.5  | (3)      | ---           | ---                    |
| B    | ug/g  | ---           | 7           | (1)  | ---    | ---         | ---         | --- | ---         | --- | ---         | (1) TCGS | ---           | ---                    |
| Ba   | ug/g  | ---           | 5.18        | (1)  | ---    | ---         | ---         | --- | ---         | --- | 5.18        | (1)      | ---           | ---                    |
| Bf   | ug/g  | 55            | 53 ± 6      | (6)  | 51.7   | 45 - 62.6   | ---         | --- | 53 ± 6      | (6) | ---         | ---      | ---           | ---                    |
| Ca   | ug/g  | 1500 ± 200    | 1400 ± 120  | (14) | 1426   | 1200 - 1549 | ---         | --- | 1284 ± 78   | (3) | 1510 ± 20   | (7)      | 1313          | (2) XRF 1300 (1) MPOES |
| Cd   | ug/g  | 3.5 ± 0.4     | 3.43 ± 0.16 | (17) | 3.43   | 3.2 - 3.68  | 3.46 ± 0.16 | (8) | ---         | --- | 3.44 ± 0.18 | (6)      | 3.49          | (1) IDMS 3.27 (2) ASV  |
| Ce   | ng/g  | ---           | 420         | (2)  | ---    | 410 - 430   | ---         | --- | 420         | (2) | ---         | ---      | ---           | ---                    |
| Cl   | %     | 1.0           | 0.99 ± 0.02 | (3)  | 0.98   | 0.97 - 1.01 | ---         | --- | 0.99 ± 0.02 | (3) | ---         | ---      | ---           | ---                    |
| Co   | ng/g  | 400           | 370 ± 40    | (12) | 340    | 310 - 440   | 350 ± 17    | (3) | 360 ± 50    | (8) | ---         | ---      | 440           | (1) SSMS               |
| Cr   | ng/g  | 690 ± 270     | 650 ± 80    | (11) | 650    | 540 - 750   | 680         | (1) | 660 ± 90    | (4) | 660 ± 60    | (3)      | 645           | (2) XRF                |
| Cs   | ng/g  | ---           | 40.5        | (2)  | ---    | 31 - 50     | ---         | --- | 40.5        | (2) | ---         | ---      | ---           | ---                    |
| Cu   | ug/g  | 63.0 ± 3.5    | 63 ± 2      | (21) | 62.9   | 60 - 69     | 64.9 ± 1.2  | (5) | 63 ± 5      | (3) | 61 ± 4      | (10)     | 61            | (1) XRF 62.8 (2) HPLC  |
| Cu   | ug/g  | ---           | ---         | ---  | ---    | ---         | ---         | --- | ---         | --- | ---         | ---      | 64            | (1) ICPMS 67 (1) SSMS  |
| Dy   | ng/g  | ---           | < 200       | ---  | ---    | ---         | ---         | --- | < 200       | --- | ---         | ---      | ---           | ---                    |
| Eu   | ng/g  | ---           | 16 ± 3      | (3)  | 15     | 13.9 - 20   | ---         | --- | 16 ± 3      | (3) | ---         | ---      | ---           | ---                    |
| F    | ug/g  | 5.2           | 5.15        | (2)  | ---    | 4.9 - 5.4   | ---         | --- | ---         | --- | ---         | ---      | 5.15          | (2) ISE                |
| Fe   | ug/g  | 195 ± 34      | 195 ± 11    | (22) | 196    | 177 - 212.5 | 205 ± 5     | (4) | 194 ± 17    | (5) | 191 ± 10    | (10)     | 202           | (2) HPLC 193 (1) SSMS  |
| H2O- | %     | ---           | 5.0         | (2)  | ---    | ---         | ---         | --- | ---         | --- | ---         | ---      | 2.6           | (1) GRAV               |
| Hf   | ng/g  | ---           | 80          | (1)  | ---    | ---         | ---         | --- | 80          | (1) | ---         | ---      | ---           | ---                    |
| Hg   | ng/g  | 57 ± 15       | 56 ± 4      | (6)  | 56     | 49 - 60     | 54          | (1) | 54 ± 5      | (3) | 60          | (2)      | ---           | ---                    |
| Ho   | ng/g  | ---           | < 200       | ---  | ---    | ---         | ---         | --- | < 200       | --- | ---         | ---      | ---           | ---                    |
| I    | ug/g  | 2.8           | 2.8 ± 0.3   | (7)  | 2.79   | 2.34 - 3.21 | ---         | --- | 2.8 ± 0.3   | (7) | ---         | ---      | ---           | ---                    |
| K    | %     | 0.969 ± 0.005 | 0.93 ± 0.07 | (12) | 0.9620 | 0.8 - 1.01  | ---         | --- | 0.88 ± 0.07 | (6) | 0.98 ± 0.02 | (4)      | 0.976         | (1) XRF 0.977 (1) FE   |
| La   | ng/g  | ---           | 370         | (2)  | ---    | 330 - 410   | ---         | --- | 370         | (2) | ---         | ---      | ---           | ---                    |
| Li   | ng/g  | ---           | 323         | (1)  | ---    | ---         | 323         | (1) | ---         | --- | ---         | ---      | ---           | ---                    |
| Lu   | ng/g  | ---           | < 60        | ---  | ---    | ---         | ---         | --- | < 60        | --- | ---         | ---      | ---           | ---                    |
| Mg   | ug/g  | 1280 ± 90     | 1330 ± 100  | (12) | 1310   | 1150 - 1451 | 1280        | (1) | 1310 ± 130  | (3) | 1340 ± 100  | (7)      | 1430          | (1) XRF                |
| Mn   | ug/g  | 17.5 ± 1.2    | 17.0 ± 1.2  | (22) | 17.2   | 14.5 - 19.3 | 17 ± 2      | (4) | 16.1 ± 1.0  | (5) | 17.3 ± 0.6  | (11)     | 19.3          | (1) ICPMS 14 (1) SSMS  |
| Mo   | ng/g  | < 200         | 140 ± 40    | (4)  | 109    | 100 - 180   | 180         | (1) | 160         | (1) | 100         | (1)      | 109           | (1) COLOR              |
| N    | %     | ---           | 6.62        | (1)  | ---    | ---         | ---         | --- | ---         | --- | ---         | ---      | ---           | ---                    |
| Na   | ug/g  | 5100 ± 300    | 4950 ± 220  | (10) | 4920   | 4600 - 5300 | ---         | --- | 4780 ± 350  | (6) | 5025 ± 260  | (4)      | 4920          | (1) FE                 |
| Ni   | ug/g  | 1.03 ± 0.19   | 1.01 ± 0.09 | (9)  | 0.98   | 0.89 - 1.15 | 1.12        | (2) | 0.98        | (1) | 0.98 ± 0.08 | (4)      | 0.89          | (1) POL 1.30 (1) SSMS  |
| Ni   | ug/g  | ---           | ---         | ---  | ---    | ---         | ---         | --- | ---         | --- | ---         | ---      | ---           | 1.05 (1) VOLT          |

TABLE 1566-1: COMPILED DATA FOR NBS SRM 1566 OYSTER TISSUE (cont.)

| ELE | UNITS | NBS          | CONSENSUS   | MEDIAN | RANGE        | AA          |      | NAA         |     | ICPES      |     | OTHER METHODS |     |        |      |     |        |
|-----|-------|--------------|-------------|--------|--------------|-------------|------|-------------|-----|------------|-----|---------------|-----|--------|------|-----|--------|
|     |       |              |             |        |              | Mean ± SD   | (n)  | Mean ± SD   | (n) | Mean ± SD  | (n) | Mean          | (n) | Method | Mean | (n) | Method |
| P   | ug/g  | 8100         | 7600 ± 500  | 7700   | 6530 - 8200  | 7800 ± 200  | (5)  | 7266        | (1) | 7700 ± 400 | (5) | 7060          | (1) | XRF    | 6480 | (2) | COLOR  |
| P   | ug/g  | ---          | ---         | ---    | ---          | ---         | ---  | ---         | --- | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |
| Pb  | ng/g  | 480 ± 40     | 480 ± 30    | 480    | 420 - 540    | 468 ± 24    | (13) | ---         | --- | 515 ± 19   | (4) | 505           | (2) | ASV    | ---  | --- | ---    |
| Pd  | ng/g  | ---          | < 2         | ---    | ---          | ---         | ---  | < 2         | --- | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |
| Rb  | ug/g  | 4.45 ± 0.09  | 4.5 ± 0.5   | 4.49   | 3.8 - 5.35   | 5.35        | (1)  | 4.5 ± 0.3   | (5) | ---        | --- | 3.8           | (1) | ICPMS  | ---  | --- | ---    |
| S   | ug/g  | 7600         | 8700 ± 700  | 8700   | 7977 - 9600  | ---         | ---  | ---         | --- | 9600       | (1) | 8340          | (2) | XRF    | 8700 | (1) | CB     |
| Sb  | ng/g  | ---          | 190 ± 200   | 150    | 9.8 - 400    | ---         | ---  | 79.9        | (2) | 400        | (1) | ---           | --- | ---    | ---  | --- | ---    |
| Sc  | ng/g  | ---          | 76 ± 8      | 72     | 69 - 89      | ---         | ---  | 76 ± 8      | (5) | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |
| Se  | ug/g  | 2.1 ± 0.5    | 2.08 ± 0.20 | 2.07   | 1.7 - 2.42   | 2.08 ± 0.19 | (7)  | 2.13 ± 0.12 | (5) | 1.9 ± 0.3  | (3) | 1.94          | (1) | ASV    | 2.26 | (1) | CSV    |
| Se  | ug/g  | ---          | ---         | ---    | ---          | ---         | ---  | ---         | --- | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |
| Si  | ug/g  | ---          | 1100        | ---    | ---          | ---         | ---  | ---         | --- | 1100       | (1) | ---           | --- | ---    | ---  | --- | ---    |
| Sm  | ng/g  | ---          | 69.5        | ---    | 63 - 76      | ---         | ---  | 69.5        | (2) | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |
| Sr  | ug/g  | 10.36 ± 0.56 | 10.1 ± 0.7  | 9.9    | 8.58 - 10.99 | 10.1 ± 0.3  | (3)  | 10.9        | (2) | 9.5 ± 0.8  | (3) | ---           | --- | ---    | ---  | --- | ---    |
| Ta  | ng/g  | ---          | 5.5         | ---    | ---          | ---         | ---  | 5.5         | (1) | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |
| Tb  | ng/g  | ---          | 15          | ---    | ---          | ---         | ---  | 15          | (1) | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |
| Th  | ng/g  | 100          | 52          | ---    | ---          | ---         | ---  | 52          | (1) | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |
| Ti  | ug/g  | ---          | 7.32        | ---    | ---          | ---         | ---  | ---         | --- | 7.32       | (1) | ---           | --- | ---    | ---  | --- | ---    |
| Tl  | ng/g  | < 5          | < 5         | ---    | ---          | ---         | ---  | ---         | --- | < 5        | --- | ---           | --- | ---    | ---  | --- | ---    |
| U   | ng/g  | 116 ± 6      | 121 ± 8     | 117    | 112 - 129    | ---         | ---  | 124 ± 6     | (3) | ---        | --- | 112           | (1) | IDMS   | ---  | --- | ---    |
| V   | ug/g  | 2.3 ± 0.1    | 2.7 ± 0.2   | 2.67   | 2.32 - 3.1   | ---         | ---  | 2.8         | (2) | 2.57       | (2) | 2.316         | (1) | IDMS   | 2.67 | (1) | COLOR  |
| V   | ug/g  | ---          | ---         | ---    | ---          | ---         | ---  | ---         | --- | ---        | --- | 2.80          | (1) | SSMS   | 2.9  | (1) | ICPMS  |
| W   | ug/g  | ---          | < 1         | ---    | ---          | ---         | ---  | < 1         | --- | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |
| Yb  | ng/g  | ---          | < 500       | ---    | ---          | ---         | ---  | < 500       | --- | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |
| Zn  | ug/g  | 852 ± 14     | 854 ± 24    | 851    | 805 - 887.6  | 868 ± 10    | (4)  | 840 ± 60    | (7) | 844 ± 24   | (9) | 750           | (1) | XRF    | 860  | (1) | ICPMS  |
| Zn  | ug/g  | ---          | ---         | ---    | ---          | ---         | ---  | ---         | --- | ---        | --- | ---           | --- | ---    | ---  | --- | ---    |

| COMPOUND            | CAS # | UNITS | NBS | CONSENSUS |
|---------------------|-------|-------|-----|-----------|
|                     |       |       |     | Mean (n)  |
| Total Folates       | ---   | ug/g  | --- | 1.2 (1)   |
| Total Pantothenates | ---   | ug/g  | --- | 10.2 (1)  |
| Thiamine            | ---   | ug/g  | --- | 5.1 (1)   |
| Protein             | ---   | %     | --- | 41.4 (1)  |
| Nicotinic Acid      | 59676 | ug/g  | --- | 101.6 (1) |
| Vitamin B-6         | 65236 | ug/g  | --- | 1.4 (1)   |
| Riboflavin          | 83885 | ug/g  | --- | 9.8 (1)   |

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (revised 3/1/86)

| Conc                              | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|-----------------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Total Folates (ug/g)</u>       |       |     |        |           | <u>As (ug/g) cont.</u> |       |     |        |           |
| 1.2                               |       |     | VV     | 85TAN 01  | 12.1                   | 1     |     | HAA    | 85NAR 03  |
|                                   |       |     |        |           | 12.2                   | 1.1   |     | IENA   | 82GLA 02  |
| <u>Total Pantothenates (ug/g)</u> |       |     |        |           | 12.4                   |       |     | IENA   | 84GLA 02  |
| 10.2                              |       |     | VV     | 85TAN 01  | 12.9                   | 0.85  |     | ICPES  | 84SUN 01  |
|                                   |       |     |        |           | 13                     | 0.6   |     | ITNA   | 86KRA 01  |
| <u>Thiamine (ug/g)</u>            |       |     |        |           | 13                     | 1.2   |     | ITNA   | 79KOB 03  |
| 5.1                               |       |     | VV     | 85TAN 01  | 13.1                   | 0.3   |     | HAA    | 83MAH 01  |
|                                   |       |     |        |           | 13.17                  | 0.34  |     | HAA    | 81UTH 01  |
| <u>Protein (%)</u>                |       |     |        |           | 13.2                   | 0.4   |     | HAA    | 83MAH 04  |
| 41.4                              |       |     | VV     | 85TAN 01  | 13.4                   | 0.3   |     | HAA    | 84NAR 01  |
|                                   |       |     |        |           | 13.9                   | 0.52  |     | AA     | 85SAK 01  |
| <u>Nicotinic acid (ug/g)</u>      |       |     |        |           | 14                     | 3     |     | ICPES  | 84NAD 01  |
| 101.6                             |       |     | VV     | 85TAN 01  | 15                     | 3     |     | NAA    | 85LEP 01  |
|                                   |       |     |        |           | 15.5                   | 0.3   | 11  | HAA    | 82JON 01  |
| <u>Vitamin B-6 (ug/g)</u>         |       |     |        |           | 15.87                  | 3.5   |     | ITNA   | 86CHI 01  |
| 1.4                               |       |     | VV     | 85TAN 01  | <u>B (ug/g)</u>        |       |     |        |           |
|                                   |       |     |        |           | 7                      | 1     |     | TCGS   | 82GLA 02  |
| <u>Riboflavin (ug/g)</u>          |       |     |        |           | <u>Ba (ug/g)</u>       |       |     |        |           |
| 9.8                               |       |     | VV     | 85TAN 01  | <                      | 4     |     | NAA    | 85LEP 01  |
|                                   |       |     |        |           | 5.18                   | 0.24  |     | ICPES  | 84NAD 01  |
| <u>Ag (ug/g)</u>                  |       |     |        |           | <u>Br (ug/g)</u>       |       |     |        |           |
| 0.86                              | 0.09  |     | IENA   | 86CHI 01  | 45                     | 1.4   |     | ITNA   | 79KOB 03  |
| 0.88                              | 0.05  |     | ITNA   | 84ALK 01  | 50.57                  | 0.45  |     | ITNA   | 86CHI 01  |
| 0.89                              | 0.02  |     | FAA    | 85OKA 02  | 51.7                   | 7.1   |     | IENA   | 86CHI 01  |
| 0.93                              | 0.06  |     | ITNA   | 86CHI 01  | 52.9                   | 3.3   |     | IENA   | 86CHI 01  |
| 1.14                              | 0.13  |     | ITNA   | 86KRA 01  | 55                     | 17    |     | IENA   | 84GLA 11  |
| 3.6                               | 0.3   |     | ICPMS  | 85PAR 01  | 62.6                   | 0.4   |     | NAA    | 85LEP 01  |
| <u>Al (ug/g)</u>                  |       |     |        |           | 180                    |       |     | EXRF   | 81PAR 01  |
| 231                               | 9     |     | FAA    | 86KRA 02  | <u>Ca (ug/g)</u>       |       |     |        |           |
| 240                               | 7     |     | ITNA   | 86KRA 02  | 880                    | 3370  | R   | AA     | 80UCH 01  |
| 252                               | 6     |     | ITNA   | 86KRA 01  | 1200                   | 400   |     | CPXRF  | 85SIM 01  |
| 263                               | 8     |     | IENA   | 85GLA 02  | 1200                   | 400   |     | NAA    | 85LEP 01  |
| 291                               | 24    |     | ICPES  | 84NAD 01  | 1300                   |       |     | MPOES  | 85ZHA 01  |
| 366                               | 9     |     | HPLC   | 85BON 01  | 1300                   | 100   |     | ICPES  | 84NAD 01  |
| <u>As (ug/g)</u>                  |       |     |        |           | 1300                   | 200   |     | ITNA   | 86KRA 01  |
| 9.2                               | 0.6   |     | ICPMS  | 85PAR 01  | 1353                   | 146   |     | RTNA   | 82MUR 01  |
| 9.7                               |       |     | ICPES  | 84MAR 01  | 1426                   | 44    |     | WXRF   | 84ALK 01  |
| 11.1                              | 1.1   |     | ICPES  | 83OLI 01  | 1499                   |       | 6   | ICPES  | 83CHA 01  |
| 11.3                              | 1     |     | RTNA   | 85GAU 04  | 1500                   | 100   |     | ICPES  | 85WHI 02  |
| 11.96                             | 0.56  |     | IENA   | 86CHI 01  | 1500                   | 100   |     | ICPES  | 84SUN 01  |
|                                   |       |     |        |           | 1500                   | 100   |     | ICPES  | 84SUN 01  |

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ca (ug/g) cont.</u> |       |     |        |           | <u>Co (ng/g) cont.</u> |       |     |        |           |
| 1510                   | 20    | 11  | ICPES  | 82JON 01  | 390                    | 60    |     | IENA   | 86CHI 01  |
| 1530                   | 30    | 11  | ICPES  | 82JON 01  | 420                    | 70    |     | IENA   | 86CHI 01  |
| 1549                   |       | 6   | ICPES  | 83CHA 01  | 440                    | 30    |     | SSMS   | 81BER 01  |
| 1738                   | 153   |     | ITNA   | 84ALK 01  | 440                    | 70    |     | ITNA   | 86CHI 01  |
| 4500                   |       |     | EXRF   | 81PAR 01  | 1200                   | 100   |     | ICPES  | 81BER 01  |
| <u>Cd (ug/g)</u>       |       |     |        |           | <u>Cr (ng/g)</u>       |       |     |        |           |
| 3.2                    | 0.1   |     | FAA    | 82SUZ 01  | 340                    | 90    | 11  | ICPES  | 82JON 01  |
| 3.2                    | 0.15  |     | ICPES  | 84SUN 01  | 540                    | 310   | 11  | CPXRF  | 84SIM 01  |
| 3.24                   | 0.29  |     | ASV    | 82SAT 02  | 550                    | 60    |     | ITNA   | 84ALK 01  |
| 3.25                   | 0.05  | 6   | ICPES  | 85OKA 02  | 600                    | 100   |     | SSMS   | 81BER 01  |
| 3.3                    | 0.3   |     | ASV    | 82GAJ 01  | 600                    | 200   | 11  | ICPES  | 82JON 01  |
| 3.31                   | 0.03  |     | AA     | 85OKA 02  | 620                    | 30    |     | NAA    | 85LEP 01  |
| 3.4                    |       | 14  | FAA    | 80CHA 09  | 650                    | 50    |     | ICPES  | 84SUN 01  |
| 3.4                    | 0.22  |     | FAA    | 81CHA 01  | 680                    | 20    |     | FAA    | 85OKA 02  |
| 3.43                   | 0.07  | 6   | ICPES  | 85OKA 02  | 700                    | 200   |     | ITNA   | 79KOB 03  |
| 3.49                   | 0.01  |     | IDMS   | 84BRO 03  | 720                    | 70    |     | ICPES  | 84SUN 01  |
| 3.5                    | 0.5   |     | AA     | 84KAN 01  | 750                    | 100   |     | ITNA   | 86CHI 01  |
| 3.54                   | 0.04  | 11  | ICPES  | 82JON 01  | 750                    | 120   | D   | CPXRF  | 84SIM 02  |
| 3.6                    |       | 14  | FAA    | 80CHA 09  | 750                    | 120   | 11  | CPXRF  | 84SIM 01  |
| 3.6                    | 0.1   |     | ICPES  | 84SUN 01  | 1100                   | 200   |     | ICPES  | 81BER 01  |
| 3.6                    | 0.1   |     | FAA    | 85OKA 02  | 1450                   | 310   |     | ITNA   | 86KRA 01  |
| 3.61                   | 0.03  | 11  | ICPES  | 82JON 01  | <u>Cs (ng/g)</u>       |       |     |        |           |
| 3.68                   | 0.06  |     | FAA    | 83DEL 01  | 31                     | 3     |     | NAA    | 85LEP 01  |
| 4.7                    | 1     |     | ICPES  | 84NAD 01  | 50                     | 4     |     | ITNA   | 84ALK 01  |
| <u>Ce (ng/g)</u>       |       |     |        |           | <u>Cu (ug/g)</u>       |       |     |        |           |
| 410                    | 180   |     | ITNA   | 86KRA 01  | 53                     |       | 6   | ICPES  | 83CHA 01  |
| 430                    | 20    |     | NAA    | 85LEP 01  | 55                     |       | 6   | ICPES  | 83CHA 01  |
| <u>Cl (%)</u>          |       |     |        |           | 60                     | 6     |     | ICPES  | 84NAD 01  |
| 0.827                  | 0.007 |     | NAA    | 85LEP 01  | 60                     | 6.7   |     | ITNA   | 84ALK 01  |
| 0.97                   | 0.04  |     | IENA   | 84GLA 11  | 60.5                   | 4.2   | 13  | HPLC   | 85BON 01  |
| 0.98                   | 0.02  |     | ITNA   | 86KRA 01  | 60.7                   | 0.7   | 6   | ICPES  | 85OKA 02  |
| 1.011                  | 0.05  |     | ITNA   | 84ALK 01  | 60.9                   | 0.5   | 6   | ICPES  | 85OKA 02  |
| <u>Co (ng/g)</u>       |       |     |        |           | 61                     |       |     | XRF    | 80SUZ 02  |
| 220                    | 30    |     | VOLT   | 84ADE 02  | 61                     | 2.1   |     | RTNA   | 82MUR 01  |
| 310                    | 10    |     | ITNA   | 84ALK 01  | 61.8                   | 0.9   | 11  | ICPES  | 82JON 01  |
| 317                    | 14    |     | ITNA   | 86KRA 01  | 62.6                   | 3.7   |     | ICPES  | 84SUN 01  |
| 340                    |       | 14  | FAA    | 80CHA 09  | 62.9                   | 0.5   | 11  | ICPES  | 82JON 01  |
| 340                    |       | 14  | FAA    | 80CHA 09  | 63                     |       |     | AA     | 80UCH 01  |
| 340                    | 10    |     | ITNA   | 86CHI 01  | 64                     | 2.1   |     | ICPMS  | 85PAR 01  |
| 340                    | 20    |     | ITNA   | 79KOB 03  | 64.4                   | 1     |     | AA     | 85OKA 02  |
| 346                    | 6     |     | NAA    | 85LEP 01  | 64.5                   | 0.6   |     | ICPES  | 81BER 01  |
| 370                    | 10    |     | FAA    | 85OKA 02  | 65                     |       | 14  | FAA    | 80CHA 09  |
|                        |       |     |        |           | 65                     |       |     | ICPES  | 84SUN 01  |
|                        |       |     |        |           | 65.2                   | 1.5   | 13  | HPLC   | 85BON 01  |

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer  | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|--------|-----|--------|-----------|
| <u>Cu (ug/g) cont.</u> |       |     |        |           | <u>H2O- (%)</u>  |        |     |        |           |
| 66                     |       |     | FAA    | 81BER 01  |                  |        |     |        |           |
| 66                     |       | 14  | FAA    | 80CHA 09  | 2.6              |        |     | GRAV   | 84NAR 01  |
| 67                     | 2     |     | SSMS   | 81BER 01  | 2.6              |        | D   | GRAV   | 85NAR 03  |
| 69                     | 14    |     | ITNA   | 86KRA 01  | 7.3              |        |     | VV     | 85TAN 01  |
| 128                    | 2     |     | AA     | 81UCH 01  |                  |        |     |        |           |
| 189                    |       |     | EXRF   | 81PAR 01  |                  |        |     |        |           |
| <u>Dy (ng/g)</u>       |       |     |        |           | <u>Hf (ng/g)</u> |        |     |        |           |
| <                      | 200   |     | NAA    | 85LEP 01  | 80               | 8      |     | NAA    | 85LEP 01  |
| <u>Eu (ng/g)</u>       |       |     |        |           | <u>Hg (ng/g)</u> |        |     |        |           |
| 13.9                   | 0.7   |     | NAA    | 85LEP 01  | 40               |        |     | CVAA   | 84GLA 02  |
| 15                     | 8     |     | ITNA   | 86KRA 01  | 49               | 7      |     | RTNA   | 84DRA 01  |
| 20                     | 10    |     | ITNA   | 79KOB 03  | 54               | 4      |     | CVAA   | 86GAU 01  |
|                        |       |     |        |           | 56               | 5      |     | RTNA   | 84DEL 01  |
| <u>F (ug/g)</u>        |       |     |        |           | <u>Ho (ng/g)</u> |        |     |        |           |
| 4.9                    | 0.5   |     | ISE    | 83KNA 01  | 58               | 6      | 7   | RTNA   | 80GAL 02  |
| 5.4                    | 1.2   |     | ISE    | 84GLA 02  | 60               |        |     | ICPES  | 84MAR 01  |
|                        |       |     |        |           | 60               | 10     |     | ICPES  | 84SUN 01  |
| <u>Fe (ug/g)</u>       |       |     |        |           | <u>I (ug/g)</u>  |        |     |        |           |
|                        |       |     |        |           | <                | 200    |     | NAA    | 85LEP 01  |
| 161                    | 2.5   |     | ICPES  | 84SUN 01  | <u>K (%)</u>     |        |     |        |           |
| 171                    | 10    |     | ICPES  | 84NAD 01  | 0.475            |        |     | MPOES  | 85ZHA 01  |
| 177                    |       |     | ICPES  | 84SUN 01  | 0.8              | 0.15   |     | ITNA   | 86KRA 01  |
| 178                    | 4     |     | ITNA   | 79KOB 03  | 0.82             | 0.07   |     | ITNA   | 86CHI 01  |
| 178                    | 32    |     | ITNA   | 86KRA 01  | 0.86             | 0.03   |     | IENA   | 86CHI 01  |
| 179                    |       | 6   | ICPES  | 83CHA 01  | 0.87             | 0.03   |     | ITNA   | 79KOB 03  |
| 180                    |       | 6   | ICPES  | 83CHA 01  | 0.96             | 0.03   |     | NAA    | 85LEP 01  |
| 190.5                  | 9     |     | ITNA   | 84ALK 01  | 0.962            | 0.03   |     | ITNA   | 84ALK 01  |
| 191                    | 5     | 11  | ICPES  | 82JON 01  | 0.962            | 0.03   |     | ITNA   | 84ALK 01  |
| 192                    | 8     |     | ICPES  | 81BER 01  | 0.963            | 0.031  |     | ICPES  | 85WHI 02  |
| 193                    | 4     |     | SSMS   | 81BER 01  | 0.9763           | 0.0301 |     | WXRF   | 84ALK 01  |
| 194                    | 9     | 11  | ICPES  | 82JON 01  | 0.977            |        |     | FE     | 80UCH 01  |
| 196                    | 6     | 11  | ICPES  | 82JON 01  | 0.98             | 0.02   | 11  | ICPES  | 82JON 01  |
| 198                    |       | 14  | FAA    | 80CHA 09  | 0.98             | 0.04   | 11  | ICPES  | 82JON 01  |
| 200                    | 4     | 13  | HPLC   | 85BON 01  | 1.01             | 0.06   |     | ICPES  | 84NAD 01  |
| 200                    | 5     | 6   | ICPES  | 85OKA 02  | 1.89             |        |     | EXRF   | 81PAR 01  |
| 201                    | 3     | 6   | ICPES  | 85OKA 02  |                  |        |     |        |           |
| 203                    | 5     | 13  | HPLC   | 85BON 01  |                  |        |     |        |           |
| 203                    | 8     | 11  | ICPES  | 82JON 01  |                  |        |     |        |           |
| 204                    | 2     |     | AA     | 85OKA 02  |                  |        |     |        |           |
| 209                    |       |     | AA     | 80UCH 01  |                  |        |     |        |           |
| 209                    |       | 14  | FAA    | 80CHA 09  |                  |        |     |        |           |
| 210                    | 4     |     | NAA    | 85LEP 01  |                  |        |     |        |           |
| 212.5                  | 37    |     | IENA   | 86CHI 01  |                  |        |     |        |           |
| 218.9                  | 9     |     | ITNA   | 86CHI 01  |                  |        |     |        |           |
| 576                    |       |     | EXRF   | 81PAR 01  |                  |        |     |        |           |

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>La (ng/g)</u> |       |     |        |           | <u>Mn (ug/g) cont.</u> |       |     |        |           |
| 330              | 110   |     | ITNA   | 86KRA 01  | 18.6                   | 0.3   |     | AA     | 85OKA 02  |
| 410              | 20    |     | NAA    | 85LEP 01  | 19                     |       |     | AA     | 80UCH 01  |
| <u>Li (ng/g)</u> |       |     |        |           | 19.3                   | 1.1   |     | ICPMS  | 85PAR 01  |
| 323              | 6     |     | AA     | 85EVA 01  | 21                     | 3     |     | NAA    | 85LEP 01  |
| <u>Lu (ng/g)</u> |       |     |        |           | 49                     |       |     | EXRF   | 81PAR 01  |
| <                | 60    |     | NAA    | 85LEP 01  | <u>Mo (ng/g)</u>       |       |     |        |           |
| <u>Mg (ug/g)</u> |       |     |        |           | <                      | 70    | L   | ICPES  | 82JON 01  |
| 980              | 30    |     | ICPES  | 84NAD 01  | 100                    | 100   | 11  | ICPES  | 82JON 01  |
| 1150             |       |     | ICPES  | 84SUN 01  | 109                    | 72    |     | COLOR  | 85EVA 02  |
| 1200             | 100   |     | ITNA   | 86KRA 01  | 160                    | 40    |     | IENA   | 86CHI 01  |
| 1270             |       | 6   | ICPES  | 83CHA 01  | 180                    | 20    |     | FAA    | 84GOH 01  |
| 1277             | 72    |     | RTNA   | 82MUR 01  | <u>N (%)</u>           |       |     |        |           |
| 1280             |       |     | AA     | 80UCH 01  | 6.62                   |       |     | VV     | 85TAN 01  |
| 1310             | 20    |     | ICPES  | 85WHI 02  | <u>Na (ug/g)</u>       |       |     |        |           |
| 1380             | 100   |     | ICPES  | 84SUN 01  | 4200                   | 300   |     | IENA   | 86CHI 01  |
| 1410             | 20    | 11  | ICPES  | 82JON 01  | 4600                   | 240   |     | ITNA   | 79KOB 03  |
| 1430             |       | 6   | ICPES  | 83CHA 01  | 4700                   | 200   |     | ITNA   | 86CHI 01  |
| 1430             | 38    |     | WXRF   | 84ALK 01  | 4800                   |       | 6   | ICPES  | 83CHA 01  |
| 1430             | 40    | 11  | ICPES  | 82JON 01  | 4800                   |       | 6   | ICPES  | 83CHA 01  |
| 1451             | 213   |     | ITNA   | 84ALK 01  | 4920                   |       |     | FE     | 80UCH 01  |
| <u>Mn (ug/g)</u> |       |     |        |           | 5030                   | 40    |     | ITNA   | 86KRA 01  |
| 3                |       |     | XRF    | 80SUZ 02  | 5070                   | 20    |     | NAA    | 85LEP 01  |
| 14               | 2     |     | SSMS   | 81BER 01  | 5082                   | 258   |     | ITNA   | 84ALK 01  |
| 14.5             |       |     | FAA    | 81BER 01  | 5200                   | 400   |     | ICPES  | 84NAD 01  |
| 15               | 1.2   |     | ITNA   | 79KOB 03  | 5300                   | 100   |     | ICPES  | 85WHI 02  |
| 15               | 2.4   |     | ITNA   | 84ALK 01  | 9750                   |       |     | MPOES  | 85ZHA 01  |
| 15.3             | 0.15  |     | ICPES  | 84SUN 01  | <u>Ni (ug/g)</u>       |       |     |        |           |
| 16.1             | 1.1   |     | ICPES  | 84NAD 01  | 0.89                   |       |     | POL    | 85UTO 01  |
| 16.57            | 0.97  |     | IENA   | 86CHI 01  | 0.92                   | 0.04  | 11  | ICPES  | 82JON 01  |
| 16.7             |       | 6   | ICPES  | 83CHA 01  | 0.95                   | 0.04  |     | ICPES  | 84SUN 01  |
| 16.7             |       | 6   | ICPES  | 83CHA 01  | 0.97                   | 0.09  | 11  | ICPES  | 82JON 01  |
| 17               | 1     |     | ITNA   | 86KRA 01  | 0.98                   | 0.1   |     | IENA   | 86CHI 01  |
| 17.1             | 0.4   |     | RTNA   | 82MUR 01  | 1.05                   | 0.02  |     | VOLT   | 84ADE 02  |
| 17.2             | 0.2   | 11  | ICPES  | 82JON 01  | 1.1                    |       |     | FAA    | 81BER 01  |
| 17.2             | 0.6   |     | FAA    | 81CHA 01  | 1.1                    | 0.17  |     | ICPES  | 84SUN 01  |
| 17.3             | 0.3   | 6   | ICPES  | 85OKA 02  | 1.15                   | 0.02  |     | FAA    | 85OKA 02  |
| 17.4             | 0.6   | 11  | ICPES  | 82JON 01  | 1.3                    | 0.1   |     | SSMS   | 81BER 01  |
| 17.4             | 0.6   | 6   | ICPES  | 85OKA 02  | 1.6                    | 0.3   |     | ICPES  | 81BER 01  |
| 17.5             | 0.7   |     | ICPES  | 81BER 01  | 1.6                    | 0.5   |     | NAA    | 85LEP 01  |
| 17.8             | 0.9   | 11  | ICPES  | 82JON 01  |                        |       |     |        |           |
| 17.9             | 0.42  |     | ICPES  | 84SUN 01  |                        |       |     |        |           |
| 17.9             | 1.3   |     | ICPES  | 85WHI 02  |                        |       |     |        |           |

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>P (ug/g)</u>  |       |     |        |           | <u>Rb (ug/g)</u> |       |     |        |           |
| 5600             | 200   |     | ICPES  | 84NAD 01  | 3.8              | 0.5   |     | ICPMS  | 85PAR 01  |
| 6420             | 150   | 11  | COLOR  | 84LIN 01  | 4.2              | 0.6   |     | ITNA   | 86KRA 01  |
| 6530             | 120   | 11  | COLOR  | 84LIN 01  | 4.27             | 0.19  |     | ITNA   | 86CHI 01  |
| 7000             | 100   |     | ICPES  | 84SUN 01  | 4.49             | 0.05  |     | ITNA   | 84ALK 01  |
| 7057             | 231   |     | WXRF   | 84ALK 01  | 4.6              | 0.1   |     | NAA    | 85LEP 01  |
| 7266             | 1144  |     | IENA   | 84ALK 01  | 5.04             | 0.1   |     | IENA   | 86CHI 01  |
| 7600             | 400   | 6   | FAA    | 81LAN 01  | 5.35             | 0.32  |     | AA     | 85EVA 01  |
| 7700             | 100   |     | ICPES  | 85WHI 02  | 20               |       |     | EXRF   | 81PAR 01  |
| 7700             | 400   | 14  | FAA    | 84LIN 01  |                  |       |     |        |           |
| 7800             | 100   |     | CPAA   | 83MAS 02  | <u>S (ug/g)</u>  |       |     |        |           |
| 7800             | 200   | 11  | ICPES  | 82JON 01  | 7977             | 248   |     | WXRF   | 84ALK 01  |
| 7800             | 300   | 6   | FAA    | 81LAN 01  | 8700             | 200   |     | WXRF   | 86BOW 01  |
| 7800             | 500   | 14  | FAA    | 84LIN 01  | 8700             | 200   |     | CB     | 86BOW 01  |
| 7900             | 100   | 11  | ICPES  | 82JON 01  | 9600             | 200   |     | ICPES  | 85WHI 02  |
| 8100             | 900   | 14  | FAA    | 84LIN 01  | <u>Sb (ng/g)</u> |       |     |        |           |
| 8200             |       |     | ICPES  | 84SUN 01  | 9.8              | 1.2   |     | NAA    | 85LEP 01  |
| <u>Pb (ng/g)</u> |       |     |        |           | 150              | 40    |     | ITNA   | 79KOB 03  |
| 420              | 20    | 14  | FAA    | 84LUN 01  | 400              | 300   |     | ICPES  | 83OLI 01  |
| 440              | 40    |     | FAA    | 82RAI 01  | <u>Sc (ng/g)</u> |       |     |        |           |
| 450              |       | 6   | FAA    | 81HIN 01  | 15               | 2     |     | ITNA   | 86CHI 01  |
| 450              |       | 6   | FAA    | 82KOI 01  | 69               |       |     | ITNA   | 84GLA 11  |
| 460              | 50    | 14  | FAA    | 84LUN 01  | 71               | 3     |     | ITNA   | 86KRA 01  |
| 460              | 60    | 14  | FAA    | 84LUN 01  | 72               | 4     |     | NAA    | 85LEP 01  |
| 470              | 10    |     | FAA    | 81CHA 01  | 79.5             |       |     | ITNA   | 86GAU 01  |
| 480              |       | 6   | FAA    | 82KOI 01  | 89               | 6     |     | ITNA   | 79KOB 03  |
| 480              |       | 6   | FAA    | 81HIN 01  | <u>Se (ug/g)</u> |       |     |        |           |
| 480              | 10    |     | FAA    | 82ATS 02  | 1.6              | 0.4   |     | NAA    | 85LEP 01  |
| 480              | 20    |     | FAA    | 85OKA 02  | 1.7              | 0.14  |     | ICPES  | 84SUN 01  |
| 500              |       | 14  | FAA    | 80CHA 09  | 1.7              | 0.2   |     | ICPES  | 83OLI 01  |
| 500              | 20    |     | ASV    | 82GAJ 01  | 1.8              | 0.2   |     | HAA    | 82MAY 01  |
| 500              | 200   | 11  | ICPES  | 82JON 01  | 1.94             | 0.07  |     | ASV    | 84ADE 01  |
| 500              | 300   | 11  | ICPES  | 82JON 01  | 2                | 0.2   |     | HAA    | 84NAR 01  |
| 510              |       | 14  | FAA    | 80CHA 09  | 2                | 0.2   |     | HAA    | 85NAR 03  |
| 510              | 60    |     | ASV    | 82SAT 02  | 2.02             | 0.9   |     | ITNA   | 84ALK 01  |
| 520              | 30    |     | ICPES  | 84SUN 01  | 2.04             | 0.04  |     | IENA   | 86CHI 01  |
| 540              | 10    |     | ICPES  | 84SUN 01  | 2.05             | 0.05  |     | HAA    | 82JUL 01  |
| 560              | 40    | 14  | FAA    | 84LUN 01  | 2.07             | 0.03  |     | FAA    | 82JUL 01  |
| 2600             | 200   |     | ICPMS  | 85PAR 01  | 2.1              | 0.2   |     | ITNA   | 84LAN 01  |
| <u>Pd (ng/g)</u> |       |     |        |           | 2.18             | 0.25  | 11  | GC     | 84SIU 01  |
| <                | 2     |     | RTNA   | 85BEM 01  | 2.21             | 0.08  |     | ITNA   | 86CHI 01  |
|                  |       |     |        |           | 2.22             | 0.03  | 11  | HAA    | 82JON 01  |

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Se (ug/g) cont.</u> |       |     |        |           | <u>Ti (ug/g)</u> |       |     |        |           |
| 2.23                   | 0.26  | 11  | GC     | 84SIU 01  | <                | 200   |     | NAA    | 85LEP 01  |
| 2.26                   | 0.24  |     | CSV    | 83AHM 02  | 7.32             | 0.91  |     | ICPES  | 84NAD 01  |
| 2.3                    |       |     | ICPES  | 84MAR 01  |                  |       |     |        |           |
| 2.3                    | 0.3   |     | ITNA   | 86KRA 01  |                  |       |     |        |           |
| 2.42                   | 0.08  | 11  | HAA    | 82JON 01  |                  |       |     |        |           |
| 2.6                    | 0.3   |     | HAA    | 85CUT 01  |                  |       |     | ICPES  | 84SUN 01  |
| <u>Se(IV) (ug/g)</u>   |       |     |        |           | <u>U (ng/g)</u>  |       |     |        |           |
| <                      | 0.01  |     | HAA    | 85CUT 01  | 112              | 1     |     | IDMS   | 83KEL 01  |
|                        |       |     |        |           | 117              | 8     |     | DNA    | 85GAU 04  |
| <u>Se(VI) (ug/g)</u>   |       |     |        |           | 126              |       |     | DNA    | 84GLA 02  |
| <                      | 0.01  |     | HAA    | 85CUT 01  | 129              |       |     | DNA    | 84GLA 11  |
| <u>Si (ug/g)</u>       |       |     |        |           | <u>V (ug/g)</u>  |       |     |        |           |
| 1100                   | 100   |     | ICPES  | 84NAD 01  | 1.64             | 0.05  |     | RTNA   | 82MUR 01  |
|                        |       |     |        |           | 2.316            | 0.006 |     | IDMS   | 85FAS 02  |
|                        |       |     |        |           | 2.44             | 0.06  | 11  | ICPES  | 82JON 01  |
| <u>Sm (ng/g)</u>       |       |     |        |           | 2.5              | 0.2   |     | ITNA   | 86KRA 01  |
| 63                     | 15    |     | ITNA   | 86KRA 01  | 2.67             |       |     | COLOR  | 85EVA 02  |
| 76                     | 7     |     | NAA    | 85LEP 01  | 2.7              | 0.4   |     | ICPES  | 81BER 01  |
|                        |       |     |        |           | 2.8              | 0.3   |     | SSMS   | 81BER 01  |
|                        |       |     |        |           | 2.9              | 0.4   |     | ICPMS  | 85PAR 01  |
|                        |       |     |        |           | 3.1              | 0.6   |     | NAA    | 85LEP 01  |
| <u>Sr (ug/g)</u>       |       |     |        |           | <u>W (ug/g)</u>  |       |     |        |           |
| 8.58                   | 0.42  |     | ICPES  | 84NAD 01  |                  |       |     |        |           |
| 9.87                   | 0.35  | 6   | ICPES  | 85OKA 02  |                  |       |     |        |           |
| 9.9                    | 0.68  |     | AA     | 85EVA 01  | <                | 1     |     | NAA    | 85LEP 01  |
| 9.9                    | 1.1   |     | FAA    | 82SUZ 03  |                  |       |     |        |           |
| 9.96                   | 0.2   | 6   | ICPES  | 85OKA 02  | <u>Yb (ng/g)</u> |       |     |        |           |
| 10.5                   | 0.3   |     | AA     | 85OKA 02  |                  |       |     |        |           |
| 10.8                   | 0.6   |     | IENA   | 85GAU 04  | <                | 500   |     | NAA    | 85LEP 01  |
| 10.99                  | 0.76  |     | IENA   | 86CHI 01  |                  |       |     |        |           |
| 92                     |       |     | EXRF   | 81PAR 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| <u>Ta (ng/g)</u>       |       |     |        |           | 716              | 30    |     | ICPES  | 84NAD 01  |
|                        |       |     |        |           | 730              | 10    |     | NAA    | 85LEP 01  |
| 5.5                    | 0.6   |     | NAA    | 85LEP 01  | 746              | 2.2   |     | ICPES  | 84SUN 01  |
| <u>Tb (ng/g)</u>       |       |     |        |           | 750              |       |     | XRF    | 80SUZ 02  |
|                        |       |     |        |           | 805              | 7     | 6   | ICPES  | 85OKA 02  |
| 15                     | 2     |     | NAA    | 85LEP 01  | 805              | 36    |     | ITNA   | 84ALK 01  |
|                        |       |     |        |           | 822              | 4     | 6   | ICPES  | 85OKA 02  |
|                        |       |     |        |           | 824              | 9     |     | ICPES  | 85WHI 02  |
| <u>Th (ng/g)</u>       |       |     |        |           | 843              | 12    | 11  | ICPES  | 82JON 01  |
|                        |       |     |        |           | 848              | 5.7   |     | ICPES  | 84SUN 01  |
| 52                     | 2     |     | NAA    | 85LEP 01  | 848.5            | 4.5   |     | IENA   | 86CHI 01  |
|                        |       |     |        |           | 850              | 14    |     | ITNA   | 86KRA 01  |

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

| Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g) cont.</u> |       |     |        |           |
| 851                    | 37    |     | SSMS   | 81BER 01  |
| 851                    | 43    |     | ICPES  | 81BER 01  |
| 859                    | 9     | 11  | ICPES  | 82JON 01  |
| 860                    |       |     | AA     | 80UCH 01  |
| 860                    | 6     |     | AA     | 85OKA 02  |
| 860                    | 50    |     | ICPMS  | 85PAR 01  |
| 869                    | 8     | 11  | ICPES  | 82JON 01  |
| 870                    | 35    |     | ITNA   | 79KOB 03  |
| 874                    |       | 14  | FAA    | 80CHA 09  |
| 878                    | 15    | 11  | ICPES  | 82JON 01  |
| 880                    |       | 14  | FAA    | 80CHA 09  |
| 884.6                  | 17    |     | ITNA   | 86CHI 01  |
| 887.6                  | 10    |     | IENA   | 86CHI 01  |
| 2953                   |       |     | EXRF   | 81PAR 01  |

TABLE 1567-1: COMPILED DATA FOR NBS SRM 1567 WHEAT FLOUR (revised 3/1/86)

| ELE  | UNITS | NBS        |      | CONSENSUS   |             | MEDIAN | RANGE | AA         |     | NAA         |     | ICPES       |            | OTHER METHODS |           |
|------|-------|------------|------|-------------|-------------|--------|-------|------------|-----|-------------|-----|-------------|------------|---------------|-----------|
|      |       | Mean ± SD  | (n)  | Mean ± SD   | (n)         |        |       | Mean ± SD  | (n) | Mean ± SD   | (n) | Mean        | (n) Method |               |           |
| Al   | ug/g  | ---        | (1)  | 17          | ---         | ---    | ---   | ---        | --- | ---         | --- | ---         | ---        | 17            | (1) SIMS  |
| As   | ng/g  | 6          | (10) | 5.7 ± 0.3   | 5.4 - 6.3   | 5.6    | ---   | 6          | (1) | 5.52 ± 0.12 | (7) | 6           | (1)        | ---           | ---       |
| B    | ug/g  | ---        | (1)  | 1.5         | ---         | ---    | ---   | ---        | --- | ---         | --- | ---         | ---        | 1.5           | (1) TCGS  |
| Be   | ng/g  | ---        | ---  | < 30        | ---         | ---    | ---   | ---        | --- | ---         | --- | < 30        | ---        | ---           | ---       |
| Bi   | ng/g  | ---        | ---  | < 8         | ---         | ---    | ---   | ---        | --- | ---         | --- | < 8         | ---        | ---           | ---       |
| Br   | ug/g  | 9          | (7)  | 8.4 ± 1.2   | 6.3 - 9.9   | 8.5    | ---   | ---        | --- | 8.7 ± 0.9   | (5) | ---         | ---        | 7.4           | (2) XRF   |
| Ca   | ug/g  | 190 ± 10   | (17) | 190 ± 11    | 170 - 208   | 195    | ---   | 185 ± 10   | (6) | ---         | --- | 197 ± 4     | (8)        | 208           | (1) FAE   |
| Ca   | ug/g  | ---        | ---  | ---         | ---         | ---    | ---   | ---        | --- | ---         | --- | ---         | ---        | 174           | (1) XRF   |
| Cd   | ng/g  | 32 ± 7     | (10) | 30 ± 5      | 20 - 40     | 30     | ---   | 30         | (1) | 30.8        | (2) | 35 ± 8      | (6)        | 24.5          | (2) ASV   |
| Cl   | ug/g  | ---        | (4)  | 591 ± 20    | 570 - 615   | 580    | ---   | ---        | --- | 591 ± 20    | (4) | ---         | ---        | ---           | ---       |
| Co   | ng/g  | ---        | (1)  | 21          | ---         | ---    | ---   | ---        | --- | 21          | (1) | ---         | ---        | ---           | ---       |
| Cr   | ng/g  | ---        | (4)  | 290 ± 80    | 225 - 400   | 240    | ---   | 232        | (2) | ---         | --- | 350         | (2)        | ---           | ---       |
| Cs   | ng/g  | ---        | (1)  | 3.5         | ---         | ---    | ---   | ---        | --- | 3.5         | (1) | ---         | ---        | ---           | ---       |
| Cu   | ug/g  | 2.0 ± 0.3  | (20) | 1.96 ± 0.10 | 1.78 - 2.08 | 2      | ---   | 2          | (2) | 1.93 ± 0.10 | (4) | 2.04 ± 0.08 | (10)       | 2.035         | (1) IDMS  |
| Cu   | ug/g  | ---        | ---  | ---         | ---         | ---    | ---   | ---        | --- | ---         | --- | ---         | ---        | 1.80          | (1) ASV   |
| Cu   | ug/g  | ---        | ---  | ---         | ---         | ---    | ---   | ---        | --- | ---         | --- | ---         | ---        | 1.84          | (2) XRF   |
| F    | ng/g  | ---        | (1)  | 40          | ---         | ---    | ---   | ---        | --- | ---         | --- | ---         | ---        | 40            | (1) ISE   |
| Fe   | ug/g  | 18.3 ± 1.0 | (18) | 17.8 ± 1.2  | 15.2 - 19.6 | 17.7   | ---   | 15.9 ± 1.0 | (3) | 17.2        | (1) | 18.4 ± 0.9  | (12)       | 15.2          | (1) FAE   |
| Fe   | ug/g  | ---        | ---  | ---         | ---         | ---    | ---   | ---        | --- | ---         | --- | ---         | ---        | 17.3          | (2) XRF   |
| Ge   | ng/g  | ---        | ---  | < 20        | ---         | ---    | ---   | ---        | --- | ---         | --- | ---         | ---        | ---           | ---       |
| H2O- | %     | ---        | (2)  | 10.6        | 9.8 - 11.5  | ---    | ---   | ---        | --- | ---         | --- | ---         | ---        | ---           | ---       |
| Hg   | ng/g  | 1.0 ± 0.8  | (4)  | 1.08 ± 0.10 | 1.0 - 1.22  | 1      | ---   | ---        | --- | 1.08 ± 0.10 | (4) | ---         | ---        | ---           | ---       |
| I    | ng/g  | ---        | (1)  | 1.97        | ---         | ---    | ---   | ---        | --- | 1.97        | (1) | ---         | ---        | ---           | ---       |
| K    | ug/g  | 1360 ± 40  | (12) | 1300 ± 90   | 1130 - 1500 | 1310   | ---   | 1190 ± 110 | (3) | 1392        | (1) | 1316 ± 100  | (8)        | 1220          | (1) XRF   |
| La   | ng/g  | ---        | (1)  | 1.8         | ---         | ---    | ---   | ---        | --- | 1.8         | (1) | ---         | ---        | ---           | ---       |
| Li   | ng/g  | ---        | (1)  | 41.4        | ---         | ---    | ---   | 41.4       | (1) | ---         | --- | ---         | ---        | ---           | ---       |
| Mg   | ug/g  | ---        | (10) | 400 ± 21    | 370 - 429   | 398    | ---   | 376        | (2) | ---         | --- | 406 ± 18    | (8)        | ---           | ---       |
| Mn   | ug/g  | 8.5 ± 0.5  | (21) | 8.6 ± 0.6   | 7.2 - 9.9   | 8.55   | ---   | 9.1 ± 1.0  | (3) | 8.5 ± 0.2   | (3) | 8.4 ± 0.2   | (11)       | 6.7           | (1) AE-AF |
| Mn   | ug/g  | ---        | ---  | ---         | ---         | ---    | ---   | ---        | --- | ---         | --- | ---         | ---        | 8.70          | (2) XRF   |
| Mo   | ng/g  | 400        | (8)  | 420 ± 30    | 380 - 470   | 420    | ---   | ---        | --- | 445         | (2) | 402 ± 18    | (5)        | 430           | (1) COLOR |

TABLE 1567-1: COMPILED DATA FOR NBS SRM 1567 WHEAT FLOUR (cont.)

| ELE | UNITS | NBS         |      | CONSENSUS   |      | MEDIAN | RANGE       | AA          |      | NAA         |      | ICPES       |      | OTHER METHODS |           |
|-----|-------|-------------|------|-------------|------|--------|-------------|-------------|------|-------------|------|-------------|------|---------------|-----------|
|     |       | Mean ± SD   | (n)  | Mean ± SD   | (n)  |        |             | Mean ± SD   | (n)  | Mean ± SD   | (n)  | Mean ± SD   | (n)  | Mean ± SD     | (n)       |
| N   | %     | ---         | (1)  | 2.2         | (1)  | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---           | ---       |
| Na  | ug/g  | 8.0 ± 1.5   | (4)  | 11.1 ± 1.8  | (4)  | 10.4   | 9 - 13      | ---         | ---  | 11.8 ± 1.3  | (3)  | ---         | ---  | 9             | (1) FAE   |
| Ni  | ng/g  | 180         | (4)  | 190 ± 30    | (4)  | 175    | 160 - 230   | 175         | (1)  | ---         | ---  | 180         | (2)  | 230           | (1) POL   |
| Ni  | ng/g  | ---         | (7)  | ---         | (7)  | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | 110           | (1) XRF   |
| P   | ug/g  | ---         | (7)  | 1390 ± 30   | (7)  | 1390   | 1350 - 1450 | ---         | ---  | ---         | ---  | 1390 ± 30   | (7)  | ---           | ---       |
| Pb  | ug/g  | 0.02 ± 0.01 | (1)  | 0.018       | (1)  | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | 0.018         | (1) ASV   |
| Rb  | ug/g  | 1           | (3)  | 0.95 ± 0.03 | (3)  | 0.94   | 0.93 - 0.99 | 0.93        | (1)  | 0.99        | (1)  | ---         | ---  | 0.94          | (1) XRF   |
| S   | ug/g  | ---         | (7)  | 1810 ± 110  | (7)  | 1810   | 1623 - 1980 | ---         | ---  | ---         | ---  | 1860        | (1)  | 1810 ± 130    | (5) CB    |
| S   | ug/g  | ---         | (35) | ---         | (35) | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | 1780          | (1) XRF   |
| Sb  | ng/g  | ---         | (2)  | 19.85       | (2)  | ---    | 1.7 - 38    | ---         | ---  | 19.8        | (2)  | ---         | ---  | ---           | ---       |
| Sc  | ng/g  | ---         | (2)  | 0.58        | (2)  | ---    | 0.5 - 0.67  | ---         | ---  | 0.58        | (2)  | ---         | ---  | ---           | ---       |
| Se  | ug/g  | 1.1 ± 0.2   | (35) | 1.03 ± 0.08 | (35) | 1.03   | 0.87 - 1.17 | 0.98 ± 0.06 | (14) | 1.11 ± 0.05 | (11) | 0.97 ± 0.14 | (4)  | 1             | (1) CSV   |
| Se  | ug/g  | ---         | (1)  | ---         | (1)  | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | 0.95          | (1) GC-MS |
| Se  | ug/g  | ---         | (4)  | ---         | (4)  | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | 1.03 ± 0.08   | (5) XRF   |
| Sm  | ng/g  | ---         | (1)  | 0.82        | (1)  | ---    | ---         | ---         | ---  | 0.82        | (1)  | ---         | ---  | ---           | ---       |
| Sr  | ug/g  | ---         | (4)  | 0.97 ± 0.11 | (4)  | 0.97   | 0.82 - 1.08 | 0.97        | (1)  | ---         | ---  | 1.05        | (2)  | 0.82          | (1) SR    |
| Te  | ng/g  | < 2         | (3)  | ---         | (3)  | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---           | ---       |
| Tl  | ng/g  | ---         | (3)  | 2.7 ± 0.6   | (3)  | 3.0    | 2.0 - 3.0   | ---         | ---  | ---         | ---  | ---         | ---  | 2.7 ± 0.6     | (3) ASV   |
| U   | ng/g  | ---         | (1)  | 0.95        | (1)  | ---    | ---         | ---         | ---  | 0.95        | (1)  | ---         | ---  | ---           | ---       |
| V   | ng/g  | ---         | (2)  | 11.25       | (2)  | ---    | 11.2 - 11.3 | ---         | ---  | 11.2        | (1)  | ---         | ---  | 11.3          | (1) COLOR |
| Zn  | ug/g  | 10.6 ± 1.0  | (17) | 10.6 ± 0.4  | (17) | 10.6   | 9.9 - 11.3  | 9.9         | (1)  | 10.9        | (1)  | 10.7 ± 0.4  | (14) | 10.3          | (1) XRF   |

COMPOUND CAS # UNITS NBS CONSENSUS

Mean (n)

|                     |       |      |     |      |     |
|---------------------|-------|------|-----|------|-----|
| Total Foliates      | ---   | ug/g | --- | 0.22 | (1) |
| Total Pantothenates | ---   | ug/g | --- | 3.1  | (1) |
| Thiamine            | ---   | ug/g | --- | 2.5  | (1) |
| Protein             | ---   | %    | --- | 12.4 | (1) |
| Nicotinic Acid      | 59676 | ug/g | --- | 14.7 | (1) |
| Vitamin B-6         | 65236 | ug/g | --- | 0.72 | (1) |
| Riboflavin          | 83885 | ug/g | --- | 0.56 | (1) |

TABLE 1567-2: INDIVIDUAL DATA FOR NBS SRM 1567 (revised 3/1/86)

| Conc                              | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-----------------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Total Folates (ug/g)</u>       |       |     |        |           | <u>Be (ng/g)</u> |       |     |        |           |
| 0.22                              |       |     | VV     | 85TAN 01  | <                | 30    | L   | ICPES  | 82KUE 01  |
| <u>Total Pantothenates (ug/g)</u> |       |     |        |           | <u>Bi (ng/g)</u> |       |     |        |           |
| 3.1                               |       |     | VV     | 85TAN 01  | <                | 8     | L   | ICPES  | 82HAH 01  |
| <u>Thiamine (ug/g)</u>            |       |     |        |           | <u>Br (ug/g)</u> |       |     |        |           |
| 2.5                               |       |     | VV     | 85TAN 01  | 6.3              | 0.4   |     | CPXRF  | 84BIS 01  |
|                                   |       |     |        |           | 7.6              | 0.7   |     | IENA   | 84GLA 11  |
| <u>Protein (%)</u>                |       |     |        |           |                  |       |     |        |           |
|                                   |       |     |        |           | 8.3              |       |     | ITNA   | 85GAU 04  |
|                                   |       |     |        |           | 8.5              | 1.4   |     | XRF    | 86GIA 01  |
| 12.4                              |       |     | VV     | 85TAN 01  | 8.6              |       |     | IENA   | 85GAU 04  |
| <u>Nicotinic acid (ug/g)</u>      |       |     |        |           |                  |       |     |        |           |
|                                   |       |     |        |           | 9.3              |       |     | ITNA   | 86GAU 01  |
|                                   |       |     |        |           | 9.9              | 1.5   |     | ITNA   | 78GIL 01  |
| 14.7                              |       |     | VV     | 85TAN 01  | <u>Ca (ug/g)</u> |       |     |        |           |
| <u>Vitamin B-6 (ug/g)</u>         |       |     |        |           | 110              | 4     |     | CPXRF  | 84BIS 01  |
|                                   |       |     |        |           | 170              | 20    |     | ICPES  | 85WHI 02  |
| 0.72                              |       |     | VV     | 85TAN 01  | 173              |       | 38  | AA     | 81YAS 01  |
| <u>Riboflavin (ug/g)</u>          |       |     |        |           | 174              | 10    |     | XRF    | 86GIA 01  |
|                                   |       |     |        |           | 179              |       | 38  | AA     | 81YAS 01  |
|                                   |       |     |        |           | 181              |       | 38  | AA     | 81YAS 01  |
| 0.56                              |       |     | VV     | 85TAN 01  | 183              |       | 38  | AA     | 81YAS 01  |
| <u>Al (ug/g)</u>                  |       |     |        |           | 193              |       |     | ICPES  | 81WOL 01  |
|                                   |       |     |        |           | 194              | 6     | 11  | ICPES  | 82JON 01  |
|                                   |       |     |        |           | 195              | 2     | 6   | ICPES  | 82KUE 01  |
|                                   |       |     |        |           | 195              | 3     | 6   | ICPES  | 82KUE 01  |
| <u>As (ng/g)</u>                  |       |     |        |           | 196              | 2     | 6   | ICPES  | 82KUE 01  |
|                                   |       |     |        |           | 197              |       | 38  | AA     | 81YAS 01  |
|                                   |       |     |        |           | 198              | 5     | 1   | ICPES  | 81WOL 02  |
| <                                 | 30    | L   | XRF    | 86GIA 01  | 199              |       | 38  | AA     | 81YAS 01  |
| 5.4                               | 0.5   |     | RTNA   | 78GIL 01  | 199              | 4     | 11  | ICPES  | 82JON 01  |
| 5.4                               | 0.5   | 7   | RTNA   | 77GIL 03  | 204              |       | 1   | ICPES  | 81WOL 02  |
| 5.4                               | 0.5   | 7   | RTNA   | 80GAL 02  | 208              | 34    |     | FAE    | 83MAR 04  |
| 5.6                               | 1     | 7   | RTNA   | 77GIL 03  | 217              | 9     | 12  | FAA    | 85CAR 02  |
| 5.6                               | 1     | 7   | RTNA   | 80GAL 02  | <u>Cd (ng/g)</u> |       |     |        |           |
| 5.6                               | 1     |     | RTNA   | 84DEL 01  | 20               |       |     | ASV    | 82GAJ 01  |
| 5.7                               |       |     | RTNA   | 85TIA 01  | 29               | 4     |     | ASV    | 82SAT 02  |
| 6                                 | 0.3   |     | HAA    | 85YAM 01  | 30               | 1     | 7   | RTNA   | 80GAL 02  |
| 6                                 | 1     | H   | ICPES  | 82HAH 01  | 30               | 10    |     | FAA    | 80SCH 08  |
| 6.3                               | 0.4   |     | RTNA   | 84BYR 02  | 30               | 20    | 6   | ICPES  | 82KUE 01  |
| 30                                | 10    |     | COLOR  | 77BUR 01  | 30               | 20    | 6   | ICPES  | 82KUE 01  |
| <u>B (ug/g)</u>                   |       |     |        |           | 30               | 20    | 6   | ICPES  | 82KUE 01  |
|                                   |       |     |        |           | 30               | 20    | 6   | ICPES  | 82KUE 01  |
| 1.5                               |       |     | TCGS   | 82GLA 02  | 30               | 20    | 6   | ICPES  | 82KUE 01  |
|                                   |       |     |        |           | 31.7             | 1     |     | RTNA   | 84BYR 02  |
|                                   |       |     |        |           | 32               | 3     |     | ICPES  | 83SCH 04  |
|                                   |       |     |        |           | 40               | 10    | 11  | ICPES  | 82JON 01  |
|                                   |       |     |        |           | 50               | 30    | 11  | ICPES  | 82JON 01  |

TABLE 1567-2: INDIVIDUAL DATA FOR NBS SRM 1567 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cl (ug/g)</u> |       |     |        |           | <u>Cu (ug/g) cont.</u> |       |     |        |           |
| 570              | 50    |     | IENA   | 84GLA 11  | 2.2                    | 0.1   |     | ICPES  | 83SCH 04  |
| 580              | 30    |     | ITNA   | 85GAU 04  | 2.6                    | 0.2   |     | FAE    | 83MAR 04  |
| 600              | 30    |     | ITNA   | 84GLA 11  | 2.6                    | 1     | 12  | FAA    | 85CAR 02  |
| 615              |       |     | ITNA   | 86GAU 01  |                        |       |     |        |           |
| <u>Co (ng/g)</u> |       |     |        |           | <u>F (ng/g)</u>        |       |     |        |           |
| 21               | 4     |     | ITNA   | 78GIL 01  | < 40                   | 200   | L   | ISE    | 84GLA 02  |
| 1970             | 280   |     | RTNA   | 84BYR 02  |                        | 20    |     | ISE    | 83KNA 01  |
| <u>Cr (ng/g)</u> |       |     |        |           | <u>Fe (ug/g)</u>       |       |     |        |           |
| <                | 250   | L   | ICPES  | 82KUE 01  | 11.5                   | 6.1   | 12  | FAE    | 83MAR 04  |
| <                | 250   | L   | ICPES  | 82KUE 01  | 14.8                   | 1.2   | 2   | FAA    | 84MIL 01  |
| <                | 250   | L   | ICPES  | 82KUE 01  | 15.2                   | 0.5   | 12  | FAE    | 83MAR 04  |
| <                | 300   | L   | XRF    | 86GIA 01  | 16.2                   | 0.5   | 2   | FAA    | 84MIL 01  |
| 225              | 100   |     | FAA    | 85CAR 01  | 16.7                   | 3.8   | 12  | FAA    | 85CAR 02  |
| 240              | 10    |     | FAA    | 83CAR 02  | 17                     | 1     | 11  | ICPES  | 82JON 01  |
| 300              | 100   | 11  | ICPES  | 82JON 01  | 17.1                   | 0.8   | 11  | ICPES  | 82JON 01  |
| 400              | 200   | 11  | ICPES  | 82JON 01  | 17.1                   | 4.8   |     | XRF    | 86GIA 01  |
| 760              | 160   |     | FAE    | 83MAR 04  | 17.2                   | 0.6   |     | ITNA   | 78GIL 01  |
| <u>Cs (ng/g)</u> |       |     |        |           | <u>Ge (ng/g)</u>       |       |     |        |           |
| < 3.5            | 200   | L   | ITNA   | 82GLA 02  | 17.5                   | 1.2   |     | CPXRF  | 84BIS 01  |
|                  |       |     | ITNA   | 86GAU 01  | 17.7                   | 0.7   | 6   | ICPES  | 82KUE 01  |
| <u>Cu (ug/g)</u> |       |     |        |           | <u>H2O (%)</u>         |       |     |        |           |
| 1.6              | 0.3   | 12  | FAA    | 85CAR 02  | 17.9                   | 0.8   | 11  | ICPES  | 82JON 01  |
| 1.78             |       |     | RTNA   | 85TIA 01  | 18                     | 1     | 11  | ICPES  | 82JON 01  |
| 1.8              |       |     | ASV    | 83HOL 01  | 18.4                   | 0.8   | 1   | ICPES  | 81WOL 02  |
| 1.8              | 0.1   |     | CPXRF  | 84BIS 01  | 18.4                   | 1     | 6   | ICPES  | 82KUE 01  |
| 1.8              | 0.2   | 11  | ICPES  | 82JON 01  | 18.6                   | 1.2   |     | ICPES  | 80SCH 08  |
| 1.88             | 0.12  |     | XRF    | 86GIA 01  | 18.7                   | 2.1   | 6   | ICPES  | 82KUE 01  |
| 1.9              | 0.2   | 11  | ICPES  | 82JON 01  | 19.3                   | 1.1   |     | ICPES  | 81KNA 01  |
| 1.95             | 0.02  |     | RTNA   | 84BYR 02  | 19.6                   |       | 1   | ICPES  | 81WOL 02  |
| 2.00             | 0.01  | 6   | ICPES  | 82KUE 01  | 19.6                   |       |     | ICPES  | 81WOL 01  |
| 2.0              | 0.1   |     | ICPES  | 81KNA 01  | 23.6                   | 3.9   | 12  | FAA    | 85CAR 02  |
| 2.0              | 0.2   | 7   | RTNA   | 80GAL 02  | <u>Ge (ng/g)</u>       |       |     |        |           |
| 2.0              | 0.2   |     | RTNA   | 78GIL 01  | <                      | 20    | L   | ICPES  | 82HAH 01  |
| 2.0              | 0.2   | 2   | FAA    | 84MIL 01  | <u>H2O (%)</u>         |       |     |        |           |
| 2.0              | 0.3   |     | ICPES  | 80SCH 08  | 9.8                    |       |     | VV     | 85TAN 01  |
| 2.0              | 0.6   | 2   | FAA    | 84MIL 01  | <u>H2O- (%)</u>        |       |     |        |           |
| 2.02             | 0.08  | 1   | ICPES  | 81WOL 02  | 11.5                   |       |     | GRAV   | 84NAR 01  |
| 2.035            | 0.007 |     | IDMS   | 84BRO 03  | 11.5                   |       | D   | GRAV   | 85NAR 03  |
| 2.04             |       |     | ICPES  | 81WOL 01  |                        |       |     |        |           |
| 2.06             | 0.03  | 6   | ICPES  | 82KUE 01  |                        |       |     |        |           |
| 2.06             | 0.04  | 6   | ICPES  | 82KUE 01  |                        |       |     |        |           |
| 2.08             |       | 1   | ICPES  | 81WOL 02  |                        |       |     |        |           |

TABLE 1567-2: INDIVIDUAL DATA FOR NBS SRM 1567 (cont.)

| Conc             | Uncer | Com | Method | Reference |  | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|--|------------------|-------|-----|--------|-----------|
| <u>Hg (ng/g)</u> |       |     |        |           |  | <u>Mn (ug/g)</u> |       |     |        |           |
| <                | 60    | L   | XRF    | 86GIA 01  |  | 5.7              | 0.8   | 12  | FAA    | 85CAR 02  |
| 1                | 0.3   | 7   | RTNA   | 80GAL 02  |  | 6.7              | 1.2   |     | AE+AF  | 82GOL 01  |
| 1                | 0.3   |     | RTNA   | 78GIL 01  |  | 7.2              | 1     |     | ICPES  | 85WHI 02  |
| 1.08             | 0.15  |     | RTNA   | 84DEL 01  |  | 7.9              | 0.2   | 2   | FAA    | 84MIL 01  |
| 1.22             | 0.16  |     | RTNA   | 84BYR 02  |  | 8                | 0.4   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           |  | 8.2              | 0.3   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           |  | 8.2              | 1.8   |     | XRF    | 86GIA 01  |
|                  |       |     |        |           |  | 8.3              |       |     | ICPES  | 81WOL 01  |
|                  |       |     |        |           |  | 8.3              | 0.03  |     | RTNA   | 84BYR 02  |
|                  |       |     |        |           |  | 8.3              | 0.2   |     | ICPES  | 80SCH 08  |
|                  |       |     |        |           |  | 8.3              | 0.2   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           |  | 8.55             | 0.15  | 6   | ICPES  | 82KUE 01  |
|                  |       |     |        |           |  | 8.58             | 0.16  | 6   | ICPES  | 82KUE 01  |
|                  |       |     |        |           |  | 8.6              |       |     | ITNA   | 85GAU 04  |
|                  |       |     |        |           |  | 8.6              | 0.4   |     | ITNA   | 78GIL 01  |
|                  |       |     |        |           |  | 8.63             | 0.38  | 1   | ICPES  | 81WOL 02  |
|                  |       |     |        |           |  | 8.67             | 0.12  | 6   | ICPES  | 82KUE 01  |
|                  |       |     |        |           |  | 8.7              |       | 1   | ICPES  | 81WOL 02  |
|                  |       |     |        |           |  | 8.8              | 0.5   |     | ICPES  | 83SCH 04  |
|                  |       |     |        |           |  | 9.2              | 1.4   |     | CPXRF  | 84BIS 01  |
|                  |       |     |        |           |  | 9.6              | 3.1   | 12  | FAA    | 85CAR 02  |
|                  |       |     |        |           |  | 9.7              | 0.4   | 2   | FAA    | 84MIL 01  |
|                  |       |     |        |           |  | 9.9              | 0.5   |     | ICPES  | 81KNA 01  |
|                  |       |     |        |           |  | <u>Mo (ng/g)</u> |       |     |        |           |
|                  |       |     |        |           |  | 310              |       |     | RTNA   | 85TIA 01  |
|                  |       |     |        |           |  | 380              | 30    | 6   | ICPES  | 82KUE 01  |
|                  |       |     |        |           |  | 390              | 90    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           |  | 400              | 40    | 6   | ICPES  | 82KUE 01  |
|                  |       |     |        |           |  | 420              | 20    |     | RTNA   | 84BYR 02  |
|                  |       |     |        |           |  | 420              | 40    | 6   | ICPES  | 82KUE 01  |
|                  |       |     |        |           |  | 420              | 70    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           |  | 430              | 63    |     | COLOR  | 85EVA 02  |
|                  |       |     |        |           |  | 470              | 70    |     | RTNA   | 84MOK 02  |
|                  |       |     |        |           |  | <u>N (%)</u>     |       |     |        |           |
|                  |       |     |        |           |  | 2.2              |       |     | VV     | 85TAN 01  |
|                  |       |     |        |           |  | <u>Na (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           |  | <                | 20    |     | ICPES  | 85WHI 02  |
|                  |       |     |        |           |  | 9                | 0.8   |     | FAE    | 83MAR 04  |
|                  |       |     |        |           |  | 10.4             | 2.5   |     | ITNA   | 78GIL 01  |
|                  |       |     |        |           |  | 12               |       |     | ITNA   | 84GLA 11  |
|                  |       |     |        |           |  | 13               | 3     |     | ITNA   | 85GAU 04  |
|                  |       |     |        |           |  |                  |       |     |        |           |
| <u>I (ng/g)</u>  |       |     |        |           |  |                  |       |     |        |           |
| 1.97             | 0.28  |     | RTNA   | 84BYR 02  |  |                  |       |     |        |           |
| 9                | 5     |     | IENA   | 84GLA 11  |  |                  |       |     |        |           |
| <u>K (ug/g)</u>  |       |     |        |           |  |                  |       |     |        |           |
| 100              | 20    |     | FAE    | 83MAR 04  |  |                  |       |     |        |           |
| 1061             | 114   | 12  | FAA    | 85CAR 02  |  |                  |       |     |        |           |
| 1130             | 190   |     | ICPES  | 85WHI 02  |  |                  |       |     |        |           |
| 1220             | 130   |     | XRF    | 86GIA 01  |  |                  |       |     |        |           |
| 1240             | 30    | 2   | FAA    | 84MIL 01  |  |                  |       |     |        |           |
| 1260             | 30    | 2   | FAA    | 84MIL 01  |  |                  |       |     |        |           |
| 1300             | 50    | 11  | ICPES  | 82JON 01  |  |                  |       |     |        |           |
| 1310             | 40    | 11  | ICPES  | 82JON 01  |  |                  |       |     |        |           |
| 1320             | 10    | 6   | ICPES  | 82KUE 01  |  |                  |       |     |        |           |
| 1320             | 10    | 6   | ICPES  | 82KUE 01  |  |                  |       |     |        |           |
| 1320             | 60    | 1   | ICPES  | 81WOL 02  |  |                  |       |     |        |           |
| 1330             | 20    | 6   | ICPES  | 82KUE 01  |  |                  |       |     |        |           |
| 1392             | 37    |     | ITNA   | 78GIL 01  |  |                  |       |     |        |           |
| 1500             |       | 1   | ICPES  | 81WOL 02  |  |                  |       |     |        |           |
| 1583             | 34    |     | CPXRF  | 84BIS 01  |  |                  |       |     |        |           |
| <u>La (ng/g)</u> |       |     |        |           |  |                  |       |     |        |           |
| 1.8              | 0.3   |     | RTNA   | 86TSU 01  |  |                  |       |     |        |           |
| <u>Li (ng/g)</u> |       |     |        |           |  |                  |       |     |        |           |
| 41.4             | 8     |     | AA     | 85EVA 01  |  |                  |       |     |        |           |
| <u>Mg (ug/g)</u> |       |     |        |           |  |                  |       |     |        |           |
| 370              | 20    |     | ICPES  | 85WHI 02  |  |                  |       |     |        |           |
| 373              | 11    | 2   | FAA    | 84MIL 01  |  |                  |       |     |        |           |
| 378              | 8     | 2   | FAA    | 84MIL 01  |  |                  |       |     |        |           |
| 397              | 14    | 1   | ICPES  | 81WOL 02  |  |                  |       |     |        |           |
| 398              | 10    | 6   | ICPES  | 82KUE 01  |  |                  |       |     |        |           |
| 406              | 3     | 6   | ICPES  | 82KUE 01  |  |                  |       |     |        |           |
| 408              |       | 1   | ICPES  | 81WOL 02  |  |                  |       |     |        |           |
| 419              | 4     | 6   | ICPES  | 82KUE 01  |  |                  |       |     |        |           |
| 420              | 10    | 11  | ICPES  | 82JON 01  |  |                  |       |     |        |           |
| 429              | 9     | 11  | ICPES  | 82JON 01  |  |                  |       |     |        |           |
| 466              | 5     |     | SIMS   | 83RAM 01  |  |                  |       |     |        |           |

TABLE 1567-2: INDIVIDUAL DATA FOR NBS SRM 1567 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ni (ng/g)</u> |       |     |        |           | <u>Sb (ng/g)</u> |       |     |        |           |
| <                | 500   | L   | ICPES  | 82KUE 01  | <                | 2     | L   | ICPES  | 82HAH 01  |
| <                | 500   | L   | ICPES  | 82KUE 01  | 1.7              | 0.08  |     | RTNA   | 84BYR 02  |
| <                | 500   | L   | ICPES  | 82KUE 01  | 38               | 1     |     | RTNA   | 78GIL 01  |
| 110              | 60    |     | XRF    | 86GIA 01  | <u>Sc (ng/g)</u> |       |     |        |           |
| 160              | 40    | 11  | ICPES  | 82JON 01  | 0.5              |       |     | ITNA   | 84GLA 11  |
| 175              |       |     | FAA    | 85LON 01  | 0.67             |       |     | ITNA   | 86GAU 01  |
| 200              | 40    | 11  | ICPES  | 82JON 01  | <u>Se (ug/g)</u> |       |     |        |           |
| 230              |       |     | POL    | 83HOL 01  | 0.7              |       |     | FAA    | 81MEY 01  |
| 1500             | 100   |     | CPXRF  | 84BIS 01  | 0.76             | 0.08  | 11  | HAA    | 82JON 01  |
| <u>P (ug/g)</u>  |       |     |        |           | 0.82             | 0.08  |     | ICPES  | 81WOL 01  |
| 150              |       |     | ICPES  | 85WHI 02  | 0.87             |       |     | HAA    | 81HAH 01  |
| 1350             | 20    | 6   | ICPES  | 82KUE 01  | 0.87             | 0.06  | H   | ICPES  | 82HAH 01  |
| 1370             | 10    | 6   | ICPES  | 82KUE 01  | 0.901            | 0.051 |     | HAA    | 80RAP 02  |
| 1370             | 50    | 11  | ICPES  | 82JON 01  | 0.91             | 0.03  | 11  | HAA    | 82JON 01  |
| 1390             | 50    | 1   | ICPES  | 81WOL 02  | 0.92             | 0.06  |     | XRF    | 86GIA 01  |
| 1400             | 10    | 6   | ICPES  | 82KUE 01  | 0.94             | 0.08  |     | HAA    | 83KOL 01  |
| 1420             | 30    | 11  | ICPES  | 82JON 01  | 0.95             | 0.04  |     | GC-MS  | 81REA 02  |
| 1450             |       | 1   | ICPES  | 81WOL 02  | 0.96             | 0.08  |     | HAA    | 81MEY 01  |
| <u>Pb (ug/g)</u> |       |     |        |           | 0.98             |       | 11  | HAA    | 85PIW 01  |
| <                | 0.02  | L   | ASV    | 82GAJ 01  | 1                |       |     | CSV    | 81HAN 01  |
| <                | 0.1   | L   | ICPES  | 82JON 01  | 1                | 0.1   |     | HAA    | 85YAM 01  |
| <                | 0.1   | L   | ICPES  | 82JON 01  | 1                | 0.1   |     | HAA    | 85NAR 03  |
| <                | 3.8   | L   | ICPES  | 82KUE 01  | 1                | 0.1   |     | HAA    | 80VIJ 01  |
| <                | 3.8   | L   | ICPES  | 82KUE 01  | 1                | 0.1   | 11  | XRF    | 80RAP 01  |
| <                | 3.8   | L   | ICPES  | 82KUE 01  | 1                | 0.2   |     | HAA    | 85NAR 01  |
| <                | 100   | L   | XRF    | 86GIA 01  | 1                | 0.2   |     | HAA    | 81REA 01  |
| 0.018            | 0.003 |     | ASV    | 82SAT 02  | 1.03             | 0.04  |     | HAA    | 81HAN 01  |
| <u>Rb (ug/g)</u> |       |     |        |           | 1.04             | 0.01  |     | EXRF   | 80RAP 03  |
|                  |       |     |        |           | 1.05             | 0.09  | 7   | RTNA   | 77GIL 03  |
| 0.93             | 0.13  |     | AA     | 85EVA 01  | 1.05             | 0.09  | 7   | RTNA   | 80GAL 02  |
| 0.94             | 0.06  |     | XRF    | 86GIA 01  | 1.05             | 0.09  | 7   | RTNA   | 77GIL 03  |
| 0.99             | 0.16  |     | ITNA   | 78GIL 01  | 1.07             |       | 11  | HAA    | 85PIW 01  |
|                  |       |     |        |           | 1.08             |       |     | ICPES  | 84MIA 01  |
|                  |       |     |        |           | 1.09             | 0.11  | 7   | RTNA   | 80GAL 02  |
|                  |       |     |        |           | 1.1              | 0.02  | 11  | XRF    | 80RAP 01  |
|                  |       |     |        |           | 1.1              | 0.02  |     | XRF    | 81KNA 01  |
| 1623             | 32    |     | CB     | 86GAU 01  | 1.1              | 0.09  |     | ICPES  | 85NAK 01  |
| 1780             | 60    |     | WXRF   | 86BOW 01  | 1.1              | 0.1   |     | HAA    | 84NAR 01  |
| 1790             |       | D   | CB     | 85JAC 01  | 1.11             | 0.05  |     | RTNA   | 78GIL 01  |
| 1790             | 100   | 6   | CB     | 84JAC 01  | 1.12             | 0.01  | 7   | RTNA   | 77GIL 03  |
| 1810             |       | D   | CB     | 85JAC 01  | 1.12             | 0.01  |     | ITNA   | 80GAL 02  |
| 1810             | 70    | 6   | CB     | 84JAC 01  | 1.12             | 0.01  |     | ITNA   | 78GIL 01  |
| 1830             | 140   |     | CB     | 86BOW 01  | 1.17             | 0.15  |     | RTNA   | 84DEL 01  |
| 1860             | 50    |     | ICPES  | 85WHI 02  | 1.17             | 0.18  | 7   | RTNA   | 80GAL 02  |
| 1980             | 210   |     | CB     | 84GLA 11  | 1.17             | 0.18  | 7   | RTNA   | 77GIL 03  |

TABLE 1567-2: INDIVIDUAL DATA FOR NBS SRM 1567 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sm (ng/g)</u> |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 0.82             | 0.05  |     | RTNA   | 86TSU 01  | 9.1              | 0.5   |     | RTNA   | 84BYR 02  |
|                  |       |     |        |           | 9.9              | 0.5   | 2   | FAA    | 84MIL 01  |
| <u>Sn (ng/g)</u> |       |     |        |           | 10               | 0.1   |     | ICPES  | 85WHI 02  |
| <                | 20    | L   | ICPES  | 82HAH 01  | 10.2             |       |     | ICPES  | 81WOL 01  |
| <u>Sr (ug/g)</u> |       |     |        |           | 10.3             | 0.4   |     | XRF    | 86GIA 01  |
| 0.82             | 0.04  |     | XRF    | 86GIA 01  | 10.5             | 0.7   | 1   | ICPES  | 81WOL 02  |
| 0.97             | 0.2   |     | AA     | 85EVA 01  | 10.5             | 0.7   | 11  | ICPES  | 82JON 01  |
| 1.02             |       | 1   | ICPES  | 81WOL 02  | 10.6             | 0.4   |     | ICPES  | 83SCH 04  |
| 1.08             | 0.06  | 1   | ICPES  | 81WOL 02  | 10.6             | 0.4   | 11  | ICPES  | 82JON 01  |
| <u>Tl (ng/g)</u> |       |     |        |           | 10.6             | 0.5   | 11  | ICPES  | 82JON 01  |
| <                | 3     | 11  | ASV    | 84LIE 01  | 10.6             | 0.5   | 11  | ICPES  | 82JON 01  |
| 2                |       | 11  | ASV    | 84LIE 01  | 10.6             | 0.4   | 11  | ICPES  | 82JON 01  |
| 3                |       | 11  | ASV    | 84LIE 01  | 10.6             | 0.7   | 11  | ICPES  | 82JON 01  |
| 3                |       | 11  | ASV    | 84LIE 01  | 10.8             |       | 1   | ICPES  | 81WOL 02  |
| <u>U (ng/g)</u>  |       |     |        |           | 10.88            | 0.56  |     | ITNA   | 78GIL 01  |
| <                | 1     |     | DNA    | 86GAU 01  | 10.9             | 0.1   | 6   | ICPES  | 82KUE 01  |
| 0.95             | 0.24  | 35  | DNA    | 80GLA 04  | 11               | 0.2   | 6   | ICPES  | 82KUE 01  |
| <u>V (ng/g)</u>  |       |     |        |           | 11               | 0.4   |     | ICPES  | 80SCH 08  |
| <                | 50    | L   | ICPES  | 82JON 01  | 11.1             | 0.4   | 6   | ICPES  | 82KUE 01  |
| 11.2             | 1.2   |     | RTNA   | 84BYR 02  | 11.3             | 1.1   |     | ICPES  | 81KNA 01  |
| 11.3             |       |     | COLOR  | 85EVA 02  | 12.6             | 1.3   | 2   | FAA    | 84MIL 01  |
|                  |       |     |        |           | 13.8             | 1.8   |     | CPXRF  | 84BIS 01  |
|                  |       |     |        |           | 14.8             | 4.2   | 12  | FAA    | 85CAR 02  |

TABLE 1568-1: COMPILED DATA FOR NBS SRM 1568 RICE FLOUR (revised 3/1/86)

| ELE  | UNITS | NBS        |      | CONSENSUS   |      | MEDIAN | RANGE       | NAA         |     | ICPES       |     | OTHER METHODS |      |        |          |        |      |
|------|-------|------------|------|-------------|------|--------|-------------|-------------|-----|-------------|-----|---------------|------|--------|----------|--------|------|
|      |       | Mean ± SD  | (n)  | Mean ± SD   | (n)  |        |             | Mean ± SD   | (n) | Mean ± SD   | (n) | Mean ± SD     | (n)  | Method | Mean (n) | Method |      |
| Al   | ug/g  | ---        |      | 115         | (1)  | ---    | ---         | ---         |     | ---         |     | 115           | (1)  | SIMS   | ---      |        |      |
| As   | ng/g  | 410 ± 50   | (24) | 414 ± 26    | (24) | 410    | 370 - 464   | 409 ± 31    | (9) | 420 ± 40    | (3) | 415 ± 17      | (11) | AA     | 420      | (1)    | XRF  |
| B    | ug/g  | ---        |      | < 1         |      | ---    | ---         | ---         |     | ---         |     | < 1           |      | TCGS   | ---      |        |      |
| Bi   | ng/g  | ---        |      | < 8         |      | ---    | ---         | ---         |     | < 8         |     | ---           |      | ---    | ---      |        |      |
| Br   | ug/g  | 1          |      | 1.11 ± 0.17 | (3)  | 1.19   | 0.92 - 1.23 | 1.08        | (2) | ---         |     | 1.19          | (1)  | XRF    | ---      |        |      |
| Ca   | ug/g  | 140 ± 20   | (14) | 148 ± 8     | (14) | 146    | 135 - 162   | ---         |     | 144 ± 15    | (5) | 135           | (1)  | FAE    | 158      | (1)    | XRF  |
| Ca   | ug/g  | ---        |      | ---         |      | ---    | ---         | ---         |     | ---         |     | 147 ± 7       | (8)  | AA     | ---      |        |      |
| Cd   | ng/g  | 29 ± 4     | (7)  | 27 ± 4      | (7)  | 28     | 20 - 30     | 29.4        | (2) | 28          | (1) | 22.5          | (2)  | ASV    | 27       | (1)    | IDMS |
| Cd   | ng/g  | ---        |      | ---         |      | ---    | ---         | ---         |     | ---         |     | 30            | (1)  | AA     | ---      |        |      |
| Cl   | ug/g  | ---        |      | 238 ± 13    | (4)  | 238    | 220 - 248   | 238 ± 13    | (4) | ---         |     | ---           |      | ---    | ---      |        |      |
| Co   | ng/g  | 20 ± 10    | (3)  | 19 ± 2      | (3)  | 18     | 16.8 - 21   | 19.5        | (2) | ---         |     | 16.8          | (1)  | AA     | ---      |        |      |
| Cr   | ng/g  | ---        |      | 240 ± 180   | (3)  | 200    | 80 - 430    | ---         |     | 140         | (2) | 430           | (1)  | FAE    | ---      |        |      |
| Cs   | ng/g  | ---        |      | < 200       |      | ---    | ---         | < 200       |     | ---         |     | ---           |      | ---    | ---      |        |      |
| Cu   | ug/g  | 2.2 ± 0.3  | (18) | 2.08 ± 0.16 | (18) | 2.1    | 1.86 - 2.4  | 2.09 ± 0.16 | (4) | 2.04 ± 0.12 | (6) | 2.13          | (1)  | IDMS   | 2.3      | (1)    | FAE  |
| Cu   | ug/g  | ---        |      | ---         |      | ---    | ---         | ---         |     | ---         |     | 1.91          | (2)  | HPLC   | 2.21     | (1)    | XRF  |
| Cu   | ug/g  | ---        |      | ---         |      | ---    | ---         | ---         |     | ---         |     | 2.2 ± 0.2     | (3)  | AA     | ---      |        |      |
| F    | ng/g  | ---        |      | 190         | (2)  | ---    | 180 - 200   | ---         |     | ---         |     | 190           | (2)  | ISE    | ---      |        |      |
| Fe   | ug/g  | 8.7 ± 0.6  | (14) | 8.0 ± 1.2   | (14) | 7.8    | 5.6 - 9.7   | 8.85        | (1) | 8.2 ± 0.9   | (8) | 8.05          | (2)  | FAE    | 9.1      | (1)    | XRF  |
| Fe   | ug/g  | ---        |      | ---         |      | ---    | ---         | ---         |     | ---         |     | 6.3           | (1)  | AA     | ---      |        |      |
| Ge   | ng/g  | ---        |      | < 20        |      | ---    | ---         | ---         |     | < 20        |     | ---           |      | ---    | ---      |        |      |
| H2O- | %     | ---        |      | 11          | (2)  | ---    | ---         | ---         |     | ---         |     | 12            | (1)  | GRAV   | ---      |        |      |
| Hg   | ng/g  | 6.0 ± 0.7  | (5)  | 6.3 ± 0.4   | (5)  | 6.4    | 5.6 - 6.8   | 6.5 ± 0.2   | (4) | ---         |     | 5.6           | (1)  | AA     | ---      |        |      |
| I    | ng/g  | ---        |      | 11.2 ± 0.4  | (5)  | 11     | 10.9 - 12   | 11.2 ± 0.4  | (5) | ---         |     | ---           |      | ---    | ---      |        |      |
| K    | ug/g  | 1120 ± 20  | (9)  | 1050 ± 90   | (9)  | 1080   | 900 - 1150  | 1125        | (1) | 1060 ± 100  | (4) | 900           | (1)  | FAE    | 1360     | (1)    | XRF  |
| K    | ug/g  | ---        |      | ---         |      | ---    | ---         | ---         |     | ---         |     | 1060 ± 60     | (3)  | AA     | ---      |        |      |
| Mg   | ug/g  | ---        |      | 497 ± 30    | (5)  | 510    | 450 - 527   | ---         |     | 490 ± 30    | (4) | 527           | (1)  | SIMS   | ---      |        |      |
| Mn   | ug/g  | 20.1 ± 0.4 | (16) | 20.5 ± 1.0  | (16) | 20.1   | 19.1 - 22.4 | 21          | (2) | 19.9 ± 0.4  | (8) | 20.9 ± 1.2    | (4)  | AA     | 22.1     | (1)    | XRF  |
| Mo   | ug/g  | 1.6        |      | 1.61 ± 0.04 | (5)  | 1.6    | 1.59 - 1.68 | 1.64        | (2) | 1.59 ± 0.01 | (3) | ---           |      | ---    | ---      |        |      |
| N    | %     | ---        |      | 1.5         | (1)  | ---    | ---         | ---         |     | ---         |     | ---           |      | ---    | ---      |        |      |
| Na   | ug/g  | 6.0 ± 1.5  | (4)  | 7.3 ± 1.8   | (4)  | 6.4    | 6 - 10      | 7.8 ± 2.0   | (3) | ---         |     | 6             | (1)  | FAE    | ---      |        |      |
| Ni   | ng/g  | 160        |      | 164 ± 12    | (4)  | 160    | 150 - 180   | ---         |     | 155         | (2) | 180           | (1)  | XRF    | 165      | (1)    | AA   |

TABLE 1568-1: COMPILED DATA FOR NBS SRM 1568 RICE FLOUR (cont.)

| ELE | UNITS | NBS        |     | CONSENSUS  |      | MEDIAN | RANGE       | MAA       |     | ICPES      |     | OTHER METHODS |          |
|-----|-------|------------|-----|------------|------|--------|-------------|-----------|-----|------------|-----|---------------|----------|
|     |       | Mean ± SD  | (n) | Mean ± SD  | (n)  |        |             | Mean ± SD | (n) | Mean ± SD  | (n) | Method        | Mean (n) |
| P   | ug/g  | ---        |     | 1630 ± 40  | (4)  | 1600   | 1600 - 1680 | ---       |     | 1630 ± 40  | (4) | ---           |          |
| Pb  | ng/g  | 45 ± 10    |     | 32         | (2)  | ---    | 30 - 35     | ---       |     | ---        |     | 32.5          | (2) ASV  |
| Rb  | ug/g  | 7          |     | 8.0 ± 0.6  | (3)  | 8.2    | 7.27 - 8.4  | 7.27      | (1) | ---        |     | 8.3           | (2) XRF  |
| S   | ug/g  | ---        |     | 1350 ± 60  | (6)  | 1360   | 1256 - 1400 | ---       |     | 1400       | (1) | 1350 ± 60     | (4) CB   |
| Sb  | ng/g  | ---        |     | 7.45       | (2)  | ---    | 5 - 9.9     | 7.45      | (2) | ---        |     | ---           |          |
| Sc  | ng/g  | ---        |     | 0.19       | (2)  | ---    | 0.13 - 0.25 | 0.19      | (2) | ---        |     | ---           |          |
| Se  | ng/g  | 400 ± 100  |     | 380 ± 50   | (34) | 380    | 280 - 480   | 440 ± 20  | (8) | 360 ± 25   | (3) | 396 ± 9       | (5) XRF  |
| Se  | ng/g  | ---        |     | ---        |      | ---    | ---         | ---       |     | ---        |     | 350 ± 40      | (15) AA  |
| Sh  | ng/g  | ---        |     | < 20       |      | ---    | ---         | ---       |     | < 20       |     | ---           |          |
| Sr  | ng/g  | ---        |     | 190        | (1)  | ---    | ---         | ---       |     | ---        |     | 190           | (1) XRF  |
| Te  | ng/g  | < 2        |     | ---        |      | ---    | ---         | ---       |     | ---        |     | ---           |          |
| Tl  | ng/g  | ---        |     | < 2        |      | ---    | ---         | ---       |     | ---        |     | < 2           | ASV      |
| U   | ng/g  | ---        |     | 0.89       | (1)  | ---    | ---         | 0.89      | (1) | ---        |     | ---           |          |
| V   | ng/g  | ---        |     | 6.2        | (1)  | ---    | ---         | 6.2       | (1) | ---        |     | ---           |          |
| Zn  | ug/g  | 19.4 ± 1.0 |     | 19.7 ± 0.6 | (16) | 19.8   | 18.7 - 21.3 | 20        | (2) | 19.7 ± 0.4 | (9) | 19.5          | (2) HPLC |
| Zn  | ug/g  | ---        |     | ---        |      | ---    | ---         | ---       |     | ---        |     | 19.3          | (2) AA   |

| COMPOUND            | CAS # | UNITS | NBS | CONSENSUS |
|---------------------|-------|-------|-----|-----------|
|                     |       |       |     | Mean (n)  |
| Total Folates       | ---   | ug/g  | --- | 0.21 (1)  |
| Total Pantothenates | ---   | ug/g  | --- | 3.8 (1)   |
| Thiamine            | ---   | ug/g  | --- | 1.4 (1)   |
| Protein             | ---   | %     | --- | 8.4 (1)   |
| Nicotinic Acid      | 59676 | ug/g  | --- | 15.7 (1)  |
| Vitamin B-6         | 65236 | ug/g  | --- | 1.4 (1)   |
| Riboflavin          | 83885 | ug/g  | --- | 0.33 (1)  |

TABLE 1568-2: INDIVIDUAL DATA FOR NBS SRM 1568 (revised 3/1/86)

| Conc                              | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|-----------------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Total Folates (ug/g)</u>       |       |     |        |           | <u>As (ng/g) cont.</u> |       |     |        |           |
| 0.21                              |       |     | VV     | 85TAN 01  | 410                    |       |     | HAA    | 84IKE 01  |
|                                   |       |     |        |           | 410                    | 20    | 7   | RTNA   | 80GAL 02  |
| <u>Total Pantothenates (ug/g)</u> |       |     |        |           | 410                    | 20    | 11  | HAA    | 81RAP 01  |
| 3.8                               |       |     | VV     | 85TAN 01  | 410                    | 70    | 11  | HAA    | 81RAP 01  |
|                                   |       |     |        |           | 410                    | 70    |     | HAA    | 81KNA 01  |
| <u>Thiamine (ug/g)</u>            |       |     |        |           | 420                    | 20    |     | HAA    | 84NAR 01  |
| 1.4                               |       |     | VV     | 85TAN 01  | 420                    | 90    |     | XRF    | 86GIA 01  |
|                                   |       |     |        |           | 436                    | 18    |     | HAA    | 82TAM 01  |
| <u>Protein (%)</u>                |       |     |        |           | 440                    |       |     | HAA    | 83KUM 01  |
| 8.4                               |       |     | VV     | 85TAN 01  | 440                    | 50    | H   | ICPES  | 82HAH 01  |
|                                   |       |     |        |           | 440                    | 80    |     | HAA    | 85NAR 03  |
| <u>Nicotinic acid (ug/g)</u>      |       |     |        |           | 452                    | 70    |     | ICPES  | 81WOL 01  |
| 15.7                              |       |     | VV     | 85TAN 01  | 460                    | 70    |     | IENA   | 82GLA 02  |
|                                   |       |     |        |           | 464                    | 11    |     | RTNA   | 84BYR 02  |
| <u>Vitamin B-6 (ug/g)</u>         |       |     |        |           | <u>B (ug/g)</u>        |       |     |        |           |
| 1.4                               |       |     | VV     | 85TAN 01  | <                      | 1     | L   | TCGS   | 82GLA 02  |
| <u>Riboflavin (ug/g)</u>          |       |     |        |           | <u>Bi (ng/g)</u>       |       |     |        |           |
| 0.33                              |       |     | VV     | 85TAN 01  | <                      | 8     | L   | ICPES  | 82HAH 01  |
| <u>Al (ug/g)</u>                  |       |     |        |           | <u>Br (ug/g)</u>       |       |     |        |           |
| 115                               |       |     | SIMS   | 83RAM 01  | 0.92                   | 0.12  |     | IENA   | 84GLA 11  |
|                                   |       |     |        |           | 1.19                   | 0.17  |     | XRF    | 86GIA 01  |
| <u>As (ng/g)</u>                  |       |     |        |           | 1.23                   | 0.08  |     | ITNA   | 78GIL 01  |
| 41                                | 2     |     | RTNA   | 84DEL 01  | <u>Ca (ug/g)</u>       |       |     |        |           |
| 90                                | 10    |     | COLOR  | 77BUR 01  | 95                     | 4     |     | CPXRF  | 84BIS 01  |
| 320                               | 40    | 11  | HAA    | 82JON 01  | 120                    | 30    |     | ICPES  | 85WHI 02  |
| 370                               |       |     | ICPES  | 84MIA 01  | 135                    | 4     |     | FAE    | 83MAR 04  |
| 380                               | 20    | 7   | RTNA   | 77GIL 03  | 136                    | 5     | 12  | FAA    | 85CAR 02  |
| 387                               |       |     | RTNA   | 85TIA 01  | 142                    | 3     |     | ICPES  | 81WOL 01  |
| 390                               | 30    |     | HAA    | 85YAM 01  | 144                    |       | 38  | AA     | 81YAS 01  |
| 390                               | 70    | 7   | RTNA   | 77GIL 03  | 144                    |       | 38  | AA     | 81YAS 01  |
| 390                               | 80    | 7   | RTNA   | 77GIL 03  | 145                    |       | 38  | AA     | 81YAS 01  |
| 400                               | 10    |     | RTNA   | 78GIL 01  | 146                    |       | 38  | AA     | 81YAS 01  |
| 400                               | 10    |     | FAA    | 84XIA 01  | 146                    |       | 38  | AA     | 81YAS 01  |
| 400                               | 10    | 7   | RTNA   | 80GAL 02  | 146                    |       | 38  | AA     | 81YAS 01  |
| 400                               | 10    | 11  | HAA    | 81RAP 01  | 148                    | 3     | 11  | ICPES  | 82JON 01  |
|                                   |       |     |        |           | 148                    | 5     | 11  | ICPES  | 82JON 01  |
|                                   |       |     |        |           | 149                    |       | 38  | AA     | 81YAS 01  |
|                                   |       |     |        |           | 151                    |       | 38  | AA     | 81YAS 01  |
|                                   |       |     |        |           | 158                    | 14    |     | XRF    | 86GIA 01  |
|                                   |       |     |        |           | 160                    | 10    |     | ICPES  | 85LYO 01  |
|                                   |       |     |        |           | 162                    | 10    | 12  | FAA    | 85CAR 02  |

TABLE 1568-2: INDIVIDUAL DATA FOR NBS SRM 1568 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cd (ng/g)</u> |       |     |        |           | <u>Cu (ug/g) cont.</u> |       |     |        |           |
| 20               |       |     | ASV    | 82GAJ 01  | 2.2                    | 0.2   | 2   | FAA    | 84MIL 01  |
| 25               | 2     |     | ASV    | 82SAT 02  | 2.2                    | 0.3   |     | ICPES  | 83SCH 04  |
| 27               | 2     |     | IDMS   | 84BRO 03  | 2.21                   | 0.22  |     | XRF    | 86GIA 01  |
| 28               | 2     |     | ICPES  | 83SCH 04  | 2.3                    | 0.2   |     | FAE    | 83MAR 04  |
| 29               | 9     | 7   | RTNA   | 80GAL 02  | 2.4                    | 0.1   | 2   | FAA    | 84MIL 01  |
| 29.8             | 1.4   |     | RTNA   | 84BYR 02  | 2.8                    | 0.3   | 12  | FAA    | 85CAR 02  |
| 30               | 10    |     | FAA    | 80SCH 08  |                        |       |     |        |           |
| 40               | 20    | 11  | ICPES  | 82JON 01  | <u>F (ng/g)</u>        |       |     |        |           |
| 60               | 30    | 11  | ICPES  | 82JON 01  | 180                    | 40    |     | ISE    | 83KNA 01  |
|                  |       |     |        |           | 200                    |       |     | ISE    | 84GLA 02  |
| <u>Cl (ug/g)</u> |       |     |        |           | <u>Fe (ug/g)</u>       |       |     |        |           |
| 220              |       |     | ITNA   | 86GAU 01  | 5.6                    | 0.9   | 2   | FAA    | 84MIL 01  |
| 238              |       |     | ITNA   | 84GLA 11  | 6.4                    | 0.6   | 12  | FAE    | 83MAR 04  |
| 246              | 11    |     | IENA   | 84GLA 11  | 7                      | 0.3   | 2   | FAA    | 84MIL 01  |
| 248              |       |     | ITNA   | 85GAU 04  | 7.1                    | 0.4   | 11  | ICPES  | 82JON 01  |
| <u>Co (ng/g)</u> |       |     |        |           | 7.3                    | 0.4   | 11  | ICPES  | 82JON 01  |
| 16.8             | 3.8   |     | FAA    | 84BOR 01  | 7.6                    | 0.4   | 11  | ICPES  | 82JON 01  |
| 18               | 2     |     | ITNA   | 78GIL 01  | 7.8                    | 0.4   | 11  | ICPES  | 82JON 01  |
| 21               | 10    |     | RTNA   | 84BYR 02  | 8                      | 1     |     | ICPES  | 80SCH 08  |
| <u>Cr (ng/g)</u> |       |     |        |           | 8.85                   | 0.94  |     | ITNA   | 78GIL 01  |
| <                | 400   | L   | XRF    | 86GIA 01  | 9.06                   | 1     |     | ICPES  | 81WOL 01  |
| 80               | 80    | 11  | ICPES  | 82JON 01  | 9.1                    | 0.9   |     | ICPES  | 85LYO 01  |
| 200              | 200   | 11  | ICPES  | 82JON 01  | 9.1                    | 1.2   |     | XRF    | 86GIA 01  |
| 430              | 70    |     | FAE    | 83MAR 04  | 9.4                    | 0.3   |     | ICPES  | 81KNA 01  |
| <u>Cs (ng/g)</u> |       |     |        |           | 9.7                    | 2.7   | 12  | FAE    | 83MAR 04  |
| <                | 200   | L   | ITNA   | 82GLA 02  | 11.2                   | 0.7   |     | CPXRF  | 84BIS 01  |
| <u>Cu (ug/g)</u> |       |     |        |           | <u>Ge (ng/g)</u>       |       |     |        |           |
| 1.76             | 0.1   |     | CPXRF  | 84BIS 01  | <                      | 20    | L   | ICPES  | 82HAH 01  |
| 1.86             | 0.03  |     | RTNA   | 84BYR 02  | <u>H2O (%)</u>         |       |     |        |           |
| 1.87             | 0.11  | 11  | HPLC   | 85ICH 01  | 9.9                    |       |     | VV     | 85TAN 01  |
| 1.9              | 0.2   | 12  | FAA    | 85CAR 02  | <u>H2O- (%)</u>        |       |     |        |           |
| 1.9              | 0.2   | 11  | ICPES  | 82JON 01  | 12                     |       | D   | GRAV   | 85NAR 03  |
| 1.9              | 0.2   | 11  | ICPES  | 82JON 01  | 12                     |       |     | GRAV   | 84NAR 01  |
| 1.95             | 0.09  | 11  | HPLC   | 85ICH 01  | <u>Hg (ng/g)</u>       |       |     |        |           |
| 2.01             | 0.01  |     | ICPES  | 81WOL 01  | <                      | 80    | L   | XRF    | 86GIA 01  |
| 2.1              |       |     | RTNA   | 85TIA 01  | 5.6                    | 0.5   |     | CVAA   | 81KNA 01  |
| 2.1              | 0.1   |     | ICPES  | 81KNA 01  | 6.4                    | 0.5   |     | RTNA   | 84DEL 01  |
| 2.1              | 0.2   |     | ICPES  | 80SCH 08  | 6.4                    | 1     |     | RTNA   | 78GIL 01  |
| 2.13             | 0.06  |     | IDMS   | 84BRO 03  | 6.4                    | 1     | 7   | RTNA   | 80GAL 02  |
| 2.2              | 0.13  | 7   | RTNA   | 80GAL 02  | 6.8                    | 1.05  |     | RTNA   | 84BYR 02  |
| 2.2              | 0.13  |     | RTNA   | 78GIL 01  |                        |       |     |        |           |

TABLE 1568-2: INDIVIDUAL DATA FOR NBS SRM 1568 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>I (ng/g)</u>  |       |     |        |           | <u>Mo (ug/g)</u> |       |     |        |           |
| 10.9             | 1.2   |     | RTNA   | 84BYR 02  | 1.59             | 0.07  | 11  | ICPES  | 82JON 01  |
| 11               | 1     |     | RTNA   | 83ALL 01  | 1.59             | 0.09  | 11  | ICPES  | 82JON 01  |
| 11               | 6     |     | IENA   | 84GLA 11  | 1.6              | 0.13  |     | ICPES  | 81WOL 01  |
| 11.1             | 1     | 35  | RTNA   | 81ALL 01  | 1.61             |       |     | RTNA   | 85TIA 01  |
| 12               | 1     | 34  | RTNA   | 81ALL 01  | 1.68             | 0.18  |     | RTNA   | 84MOK 02  |
| <u>K (ug/g)</u>  |       |     |        |           | <u>N (%)</u>     |       |     |        |           |
| 900              | 100   |     | FAE    | 83MAR 04  | 1.5              |       |     | VV     | 85TAN 01  |
| 965              | 11    |     | ICPES  | 81WOL 01  |                  |       |     |        |           |
| 970              | 160   |     | ICPES  | 85WHI 02  | <u>Na (ug/g)</u> |       |     |        |           |
| 995              | 48    | 12  | FAA    | 85CAR 02  | <                | 20    |     | ICPES  | 85WHI 02  |
| 1080             | 20    | 2   | FAA    | 84MIL 01  | 6                | 1.6   |     | FAE    | 83MAR 04  |
| 1100             | 30    | 2   | FAA    | 84MIL 01  | 6.4              |       |     | ITNA   | 84GLA 11  |
| 1125             | 16    |     | ITNA   | 78GIL 01  | 6.9              | 0.4   |     | ITNA   | 78GIL 01  |
| 1140             | 30    | 11  | ICPES  | 82JON 01  | 10               |       |     | ITNA   | 85GAU 04  |
| 1150             | 80    | 11  | ICPES  | 82JON 01  | <u>Ni (ng/g)</u> |       |     |        |           |
| 1239             | 28    |     | CPXRF  | 84BIS 01  | 150              | 20    | 11  | ICPES  | 82JON 01  |
| 1360             | 160   |     | XRF    | 86GIA 01  | 160              | 30    | 11  | ICPES  | 82JON 01  |
| <u>Mg (ug/g)</u> |       |     |        |           | 165              |       |     | FAA    | 85LON 01  |
| 450              | 20    |     | ICPES  | 85WHI 02  | 180              | 60    |     | XRF    | 86GIA 01  |
| 490              | 30    |     | ICPES  | 85LYO 01  | 2000             | 100   |     | CPXRF  | 84BIS 01  |
| 510              | 10    | 11  | ICPES  | 82JON 01  | <u>P (ug/g)</u>  |       |     |        |           |
| 510              | 20    | 11  | ICPES  | 82JON 01  | 1420             | 2     |     | ICPES  | 84PRI 01  |
| 527              | 6     |     | SIMS   | 83RAM 01  | 1600             | 60    | 11  | ICPES  | 82JON 01  |
| <u>Mn (ug/g)</u> |       |     |        |           | 1600             | 100   |     | ICPES  | 85LYO 01  |
| 19.1             | 0.9   | 11  | ICPES  | 82JON 01  | 1630             | 30    | 11  | ICPES  | 82JON 01  |
| 19.5             | 1     | 2   | FAA    | 84MIL 01  | 1680             | 40    |     | ICPES  | 85WHI 02  |
| 19.7             | 0.4   |     | ICPES  | 83SCH 04  | <u>Pb (ng/g)</u> |       |     |        |           |
| 19.8             | 1.5   |     | ICPES  | 85LYO 01  | <                | 100   | L   | ICPES  | 82JON 01  |
| 19.9             | 0.4   |     | ICPES  | 81WOL 01  | <                | 100   | L   | ICPES  | 82JON 01  |
| 19.95            | 0.69  |     | ITNA   | 78GIL 01  | 30               |       |     | ASV    | 82GAJ 01  |
| 20               | 3     |     | ICPES  | 80SCH 08  | 35               | 4     |     | ASV    | 82SAT 02  |
| 20.1             | 0.3   | 11  | ICPES  | 82JON 01  | 100              | 90    |     | XRF    | 86GIA 01  |
| 20.2             | 0.5   | 11  | ICPES  | 82JON 01  | <u>Rb (ug/g)</u> |       |     |        |           |
| 20.7             | 1.4   |     | ICPES  | 85WHI 02  | 7.27             | 0.21  |     | ITNA   | 78GIL 01  |
| 20.8             | 0.4   | 12  | FAA    | 85CAR 02  | 8.2              | 0.8   |     | CPXRF  | 84BIS 01  |
| 21               | 0.4   | 12  | FAA    | 85CAR 02  | 8.4              | 0.9   |     | XRF    | 86GIA 01  |
| 21.4             | 1.4   |     | ICPES  | 81KNA 01  |                  |       |     |        |           |
| 22.1             | 0.7   |     | RTNA   | 84BYR 02  |                  |       |     |        |           |
| 22.1             | 2.8   |     | XRF    | 86GIA 01  |                  |       |     |        |           |
| 22.4             | 0.9   | 2   | FAA    | 84MIL 01  |                  |       |     |        |           |
| 25.8             | 1.1   |     | CPXRF  | 84BIS 01  |                  |       |     |        |           |

TABLE 1568-2: INDIVIDUAL DATA FOR NBS SRM 1568 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>S (ug/g)</u>  |       |     |        |           | <u>Se (ng/g) cont.</u> |       |     |        |           |
| 1059             | 5     |     | ICPES  | 84PRI 01  | 420                    | 30    |     | ITNA   | 78GIL 01  |
| 1256             | 58    |     | CB     | 86GAU 01  | 420                    | 30    | 7   | RTNA   | 77GIL 03  |
| 1320             | 30    |     | WXRF   | 86BOW 01  | 430                    | 40    |     | RTNA   | 84DEL 01  |
| 1360             | 50    |     | CB     | 86BOW 01  | 450                    | 30    |     | RTNA   | 78GIL 01  |
| 1380             |       | D   | CB     | 85JAC 01  | 460                    | 80    | 7   | RTNA   | 77GIL 03  |
| 1380             | 60    | 6   | CB     | 84JAC 01  | 460                    | 80    | 7   | RTNA   | 80GAL 02  |
| 1400             |       |     | ICPES  | 85WHI 02  | 480                    | 70    | 7   | RTNA   | 80GAL 02  |
| 1400             |       | D   | CB     | 85JAC 01  | 480                    | 70    |     | HAA    | 82TAM 01  |
| 1400             | 30    | 6   | CB     | 84JAC 01  | <u>Sn (ng/g)</u>       |       |     |        |           |
| 1520             | 70    |     | CB     | 84GLA 11  | <                      | 20    | L   | ICPES  | 82HAH 01  |
| <u>Sb (ng/g)</u> |       |     |        |           | <u>Sr (ng/g)</u>       |       |     |        |           |
| <                | 2     | L   | ICPES  | 82HAH 01  | 190                    | 40    |     | XRF    | 86GIA 01  |
| 5                | 1     |     | RTNA   | 78GIL 01  | <u>Tl (ng/g)</u>       |       |     |        |           |
| 9.9              | 0.3   |     | RTNA   | 84BYR 02  | <                      | 2     | 11  | ASV    | 84LIE 01  |
| <u>Sc (ng/g)</u> |       |     |        |           | <                      | 2     | 11  | ASV    | 84LIE 01  |
| 0.13             | 0.17  |     | ITNA   | 86GAU 01  | <                      | 2     | 11  | ASV    | 84LIE 01  |
| 0.25             |       |     | ITNA   | 84GLA 11  | <                      | 2     | 11  | FAA    | 84LIE 01  |
| <u>Se (ng/g)</u> |       |     |        |           | <u>U (ng/g)</u>        |       |     |        |           |
| 280              | 30    | 11  | HAA    | 82JON 01  | <                      | 1     |     | DNA    | 86GAU 01  |
| 280              | 55    |     | FAA    | 81MEY 01  | 0.89                   | 0.22  | 35  | DNA    | 80GLA 04  |
| 300              |       | 11  | HAA    | 85PIW 01  | <u>V (ng/g)</u>        |       |     |        |           |
| 315              | 14    |     | HAA    | 81HAH 01  | <                      | 50    | L   | ICPES  | 82JON 01  |
| 320              | 40    | 11  | HAA    | 82JON 01  | 6.2                    | 0.8   |     | RTNA   | 84BYR 02  |
| 320              | 50    |     | HAA    | 81MEY 01  | <u>Zn (ug/g)</u>       |       |     |        |           |
| 331              | 29    |     | ICPES  | 81WOL 01  | 17.3                   | 7.2   | 12  | FAA    | 85CAR 02  |
| 338              | 3     | 7   | RTNA   | 77GIL 03  | 18.7                   | 4.6   | 2   | FAA    | 84MIL 01  |
| 350              |       | 11  | HAA    | 85PIW 01  | 19.1                   | 0.4   |     | RTNA   | 84BYR 02  |
| 370              | 30    |     | HAA    | 80RAP 02  | 19.1                   | 2.4   |     | ICPES  | 85LYO 01  |
| 370              | 60    | H   | ICPES  | 82HAH 01  | 19.3                   | 0.7   | 11  | ICPES  | 82JON 01  |
| 380              |       |     | ICPES  | 84MIA 01  | 19.4                   | 0.4   |     | ICPES  | 81WOL 01  |
| 380              | 10    |     | HAA    | 81HAN 01  | 19.5                   | 0.5   | 11  | HPLC   | 85ICH 01  |
| 380              | 20    |     | HAA    | 83KOL 01  | 19.5                   | 0.6   | 11  | HPLC   | 85ICH 01  |
| 380              | 40    |     | HAA    | 84NAR 01  | 19.6                   | 0.4   |     | ICPES  | 80SCH 08  |
| 380              | 40    |     | XRF    | 86GIA 01  | 19.8                   | 0.8   | 11  | ICPES  | 82JON 01  |
| 380              | 40    |     | HAA    | 85YAM 01  | 19.9                   | 0.4   |     | ICPES  | 83SCH 04  |
| 380              | 50    |     | HAA    | 80VIJ 01  | 19.9                   | 1.4   | 2   | FAA    | 84MIL 01  |
| 390              | 20    |     | GC-MS  | 81REA 02  | 19.97                  | 0.69  |     | ITNA   | 78GIL 01  |
| 390              | 70    |     | HAA    | 81REA 01  | 20                     | 1     | 11  | ICPES  | 82JON 01  |
| 400              | 8     |     | EXRF   | 80RAP 03  |                        |       |     |        |           |
| 400              | 20    | 11  | XRF    | 80RAP 01  |                        |       |     |        |           |
| 400              | 20    |     | XRF    | 81KNA 01  |                        |       |     |        |           |
| 400              | 100   |     | HAA    | 85NAR 03  |                        |       |     |        |           |
| 400              | 100   | 11  | XRF    | 80RAP 01  |                        |       |     |        |           |
| 420              | 30    |     | ITNA   | 80GAL 02  |                        |       |     |        |           |

TABLE 1568-2: INDIVIDUAL DATA FOR NBS SRM 1568 (cont.)

| Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g) cont.</u> |       |     |        |           |
| 20.2                   | 0.8   | 11  | ICPES  | 82JON 01  |
| 20.4                   | 0.9   |     | ICPES  | 85WHI 02  |
| 21.3                   | 1.3   |     | ICPES  | 81KNA 01  |
| 21.9                   | 1.8   |     | XRF    | 86GIA 01  |
| 26.3                   | 3.1   |     | CPXRF  | 84BIS 01  |

TABLE 1569-1: COMPILED DATA FOR NBS SRM 1569 BREWER'S YEAST (revised 3/1/86)

| ELEMENT | UNITS | NBS         |      | CONSENSUS   |      | MEDIAN | RANGE       | NAA         |      | ICPES       |     | OTHER METHODS |          |
|---------|-------|-------------|------|-------------|------|--------|-------------|-------------|------|-------------|-----|---------------|----------|
|         |       | Mean ± SD   | (n)  | Mean ± SD   | (n)  |        |             | Mean ± SD   | (n)  | Mean ± SD   | (n) | Mean ± SD     | (n)      |
| Al      | ug/g  | ---         | (2)  | 2150        | (2)  | ---    | 2000 - 2300 | 2300        | (1)  | 2000        | (1) | ---           | ---      |
| As      | ng/g  | ---         | (3)  | 590 ± 70    | (3)  | 560    | 530 - 670   | 670         | (1)  | ---         | --- | 545           | (2) AA   |
| B       | ug/g  | ---         | (1)  | 6.2         | (1)  | ---    | ---         | ---         | ---  | ---         | --- | 6.2           | (1) TCGS |
| Be      | ng/g  | ---         | (1)  | 22          | (1)  | ---    | ---         | ---         | ---  | ---         | --- | 22            | (1) FAAC |
| Br      | ug/g  | ---         | (3)  | 3.6 ± 3.0   | (3)  | 3.4    | 0.65 - 6.7  | 3.6 ± 3.0   | (3)  | ---         | --- | ---           | ---      |
| Ca      | ug/g  | ---         | (4)  | 2370 ± 100  | (4)  | 2290   | 2270 - 2490 | ---         | ---  | 2370 ± 100  | (4) | ---           | ---      |
| Cd      | ng/g  | ---         | (4)  | 170 ± 90    | (4)  | 120    | 80 - 290    | ---         | ---  | 170 ± 90    | (4) | ---           | ---      |
| Ce      | ug/g  | ---         | (1)  | 2.3         | (1)  | ---    | ---         | 2.3         | (1)  | ---         | --- | ---           | ---      |
| Cl      | ug/g  | ---         | (2)  | 485         | (2)  | ---    | 460 - 510   | 485         | (2)  | ---         | --- | ---           | ---      |
| Co      | ng/g  | ---         | (2)  | 280         | (2)  | ---    | 260 - 300   | 280         | (2)  | ---         | --- | ---           | ---      |
| Cr      | ug/g  | 2.12 ± 0.05 | (16) | 2.00 ± 0.26 | (16) | 2.08   | 1.2 - 2.17  | 2.05 ± 0.17 | (11) | 1.2         | (1) | 1.7 ± 0.6     | (3) AA   |
| Cr      | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | 2.08          | (1) IDMS |
| Cr      | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | 2             | (1) NH   |
| Cs      | ng/g  | ---         | ---  | < 200       | ---  | ---    | ---         | < 200       | ---  | ---         | --- | ---           | ---      |
| Cu      | ug/g  | ---         | (5)  | 16 ± 3      | (5)  | 17.7   | 11 - 18.4   | 11          | (1)  | 16.8 ± 2.5  | (4) | ---           | ---      |
| Eu      | ng/g  | ---         | (1)  | 20          | (1)  | ---    | ---         | 20          | (1)  | ---         | --- | ---           | ---      |
| F       | ug/g  | ---         | (2)  | 14.5        | (2)  | ---    | 14 - 15     | ---         | ---  | ---         | --- | 14.5          | (2) ISE  |
| Fe      | ug/g  | ---         | (4)  | 660 ± 50    | (4)  | 660    | 590 - 707   | 648         | (2)  | 676         | (2) | ---           | ---      |
| Ga      | ug/g  | ---         | (1)  | 7.1         | (1)  | ---    | ---         | 7.1         | (1)  | ---         | --- | ---           | ---      |
| Hf      | ng/g  | ---         | (1)  | 130         | (1)  | ---    | ---         | 130         | (1)  | ---         | --- | ---           | ---      |
| Hg      | ng/g  | ---         | (1)  | 22          | (1)  | ---    | ---         | ---         | ---  | ---         | --- | ---           | ---      |
| I       | ng/g  | ---         | (2)  | 46          | (2)  | ---    | 32 - 60     | 46          | (2)  | ---         | --- | 22            | (1) AA   |
| K       | %     | ---         | (6)  | 1.52 ± 0.11 | (6)  | 1.45   | 1.4 - 1.71  | 1.63        | (2)  | 1.47 ± 0.08 | (4) | ---           | ---      |

TABLE 1569-1: COMPILED DATA FOR NBS SRM 1569 BREWER'S YEAST (cont.)

| ELEMENT   | UNITS | NBS       |     | CONSENSUS   |     | MEDIAN | RANGE       | NAA       |     | ICPES       |     | OTHER METHODS |          |
|-----------|-------|-----------|-----|-------------|-----|--------|-------------|-----------|-----|-------------|-----|---------------|----------|
|           |       | Mean ± SD | (n) | Mean ± SD   | (n) |        |             | Mean ± SD | (n) | Mean ± SD   | (n) | Mean ± SD     | (n)      |
| Li        | ng/g  | ---       | (1) | 440         | (1) | ---    | ---         | ---       | --- | ---         | --- | 440           | (1) AAC  |
| Mg        | ug/g  | ---       | (5) | 1850 ± 100  | (5) | 1870   | 1730 - 1980 | 1780      | (1) | 1870 ± 100  | (4) | ---           | ---      |
| Mn        | ug/g  | ---       | (5) | 10.0 ± 0.7  | (5) | 10     | 9.1 - 10.9  | 10        | (1) | 10.0 ± 0.8  | (4) | ---           | ---      |
| Mo        | ug/g  | ---       | (4) | 3.6 ± 0.3   | (4) | 3.4    | 3.3 - 3.9   | ---       | --- | 3.6 ± 0.3   | (4) | ---           | ---      |
| Na        | ug/g  | ---       | (3) | 610 ± 90    | (3) | 660    | 510 - 670   | 610 ± 90  | (3) | ---         | --- | ---           | ---      |
| Ni        | ug/g  | ---       | (4) | 5.3 ± 0.7   | (4) | 4.8    | 4.6 - 6     | ---       | --- | 5.3 ± 0.7   | (4) | ---           | ---      |
| P         | %     | ---       | (4) | 1.04 ± 0.03 | (4) | 1.02   | 1.0 - 1.08  | ---       | --- | 1.04 ± 0.03 | (4) | ---           | ---      |
| Pb        | ng/g  | ---       | (2) | 350         | (2) | ---    | 200 - 500   | ---       | --- | 350         | (2) | ---           | ---      |
| Rb        | ug/g  | ---       | (1) | 16          | (1) | ---    | ---         | 16        | (1) | ---         | --- | ---           | ---      |
| S         | ug/g  | ---       | (3) | 4140 ± 40   | (3) | 4140   | 4100 - 4170 | ---       | --- | ---         | --- | 4140          | (1) XRF  |
| S         | ug/g  | ---       | --- | ---         | --- | ---    | ---         | ---       | --- | ---         | --- | 4135          | (2) CB   |
| Sb        | ng/g  | ---       | (2) | 152         | (2) | ---    | 75 - 230    | 152       | (2) | ---         | --- | ---           | ---      |
| Sc        | ng/g  | ---       | (5) | 187 ± 21    | (5) | 180    | 170 - 220   | 187 ± 21  | (5) | ---         | --- | ---           | ---      |
| Se        | ug/g  | ---       | (3) | 0.97 ± 0.04 | (3) | 0.98   | 0.92 - 1.01 | 0.92      | (1) | ---         | --- | 1             | (2) AA   |
| Sr        | ug/g  | ---       | (1) | 10.3        | (1) | ---    | ---         | 10.3      | (1) | ---         | --- | ---           | ---      |
| Th        | ug/g  | ---       | (1) | 3.7         | (1) | ---    | ---         | 3.7       | (1) | ---         | --- | ---           | ---      |
| Ti        | ug/g  | ---       | (1) | 38          | (1) | ---    | ---         | 38        | (1) | ---         | --- | ---           | ---      |
| U         | ng/g  | ---       | (8) | 470 ± 16    | (8) | 470    | 441 - 490   | 474 ± 11  | (7) | ---         | --- | 441           | (1) IDMS |
| U-235/238 | ratio | ---       | (1) | 0.0073      | (1) | ---    | ---         | ---       | --- | ---         | --- | 0.0073        | (1) IDMS |
| V         | ug/g  | ---       | (2) | 4.25        | (2) | ---    | 4.1 - 4.4   | 4.1       | (1) | 4.4         | (1) | ---           | ---      |
| Zn        | ug/g  | ---       | (9) | 65 ± 3      | (9) | 65     | 59 - 70     | 70        | (1) | 64.5 ± 3.1  | (8) | ---           | ---      |

TABLE 1569-2: INDIVIDUAL DATA FOR NBS SRM 1569 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (ug/g)</u> |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| 2000             | 56    | 11  | ICPES  | 82JON 01  | 0.078            | 0.026 |     | FAA    | 74WOL 01  |
| 2300             | 10    |     | ITNA   | 78BER 01  | 0.7              | 0.1   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 0.87             |       |     | FAA    | 80CHA 01  |
|                  |       |     |        |           | 1.04             | 0.04  | 7   | FAA    | 80CHA 01  |
|                  |       |     |        |           | 1.12             | 0.08  |     | RTNA   | 78GOE 01  |
| 530              | 80    | 11  | HAA    | 82JON 01  | 1.2              | 0.6   | 11  | ICPES  | 82JON 01  |
| 560              | 30    | 11  | HAA    | 82JON 01  | 1.558            | 0.015 | 11  | RTNA   | 78MCC 01  |
| 670              | 70    |     | IENA   | 82GLA 02  | 2.00             | 0.02  |     | NM     | 80SHI 01  |
|                  |       |     |        |           | 2.02             | 0.1   |     | FAA    | 83CAR 02  |
|                  |       |     |        |           | 2.043            |       | 11  | NAA    | 79VER 01  |
|                  |       |     |        |           | 2.074            | 0.012 | 11  | RTNA   | 78MCC 01  |
| 6.2              |       |     | TCGS   | 82GLA 02  | 2.08             | 0.09  |     | IDMS   | 79VEI 01  |
|                  |       |     |        |           | 2.082            | 0.013 | 24  | ITNA   | 78MCC 01  |
|                  |       |     |        |           | 2.094            |       | 11  | NAA    | 79VER 01  |
|                  |       |     |        |           | 2.096            | 0.02  | 24  | ITNA   | 78MCC 01  |
|                  |       |     |        |           | 2.1              | 0.5   |     | ITNA   | 79KOB 03  |
|                  |       |     |        |           | 2.119            | 0.025 | 24  | ITNA   | 78MCC 01  |
|                  |       |     |        |           | 2.12             | 0.08  |     | ITNA   | 78BER 01  |
|                  |       |     |        |           | 2.13             | 0.12  | 7   | FAA    | 80CHA 01  |
|                  |       |     |        |           | 2.13             | 0.13  |     | RTNA   | 79TJI 01  |
|                  |       |     |        |           | 2.17             | 0.11  |     | ITNA   | 82GLA 02  |
|                  |       |     |        |           |                  |       |     |        |           |
|                  |       |     |        |           | <u>Cs (ng/g)</u> |       |     |        |           |
|                  |       |     |        |           | <                | 200   | L   | ITNA   | 82GLA 02  |
|                  |       |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 11               | 2     |     | ITNA   | 78BER 01  |
|                  |       |     |        |           | 13               | 1     | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 17.7             | 0.2   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 18.1             | 0.7   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 18.4             | 0.3   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | <u>Eu (ng/g)</u> |       |     |        |           |
|                  |       |     |        |           | 20               | 10    |     | ITNA   | 79KOB 03  |
|                  |       |     |        |           | <u>F (ug/g)</u>  |       |     |        |           |
|                  |       |     |        |           | 14               | 2     |     | ISE    | 83KNA 01  |
|                  |       |     |        |           | 15               | 2     |     | ISE    | 84GLA 02  |
|                  |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 257              | 34    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 499              | 15    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 590              | 24    |     | ITNA   | 79KOB 03  |
|                  |       |     |        |           | 660              | 15    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 693              | 25    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 707              | 16    |     | ITNA   | 78BER 01  |
|                  |       |     |        |           | <u>Co (ng/g)</u> |       |     |        |           |
| 260              | 20    |     | ITNA   | 78BER 01  |                  |       |     |        |           |
| 300              | 60    |     | ITNA   | 79KOB 03  |                  |       |     |        |           |

TABLE 1569-2: INDIVIDUAL DATA FOR NBS SRM 1569 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ga (ug/g)</u> |       |     |        |           | <u>Na (ug/g)</u> |       |     |        |           |
| 7.1              | 0.5   |     | ITNA   | 78BER 01  | 510              | 30    |     | ITNA   | 78BER 01  |
|                  |       |     |        |           | 660              |       |     | ITNA   | 84GLA 11  |
| <u>Hf (ng/g)</u> |       |     |        |           | 670              | 42    |     | ITNA   | 79KOB 03  |
| 130              | 10    |     | ITNA   | 78BER 01  | <u>Ni (ug/g)</u> |       |     |        |           |
| <u>Hg (ng/g)</u> |       |     |        |           | 4.6              | 0.3   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 4.8              | 0.1   | 11  | ICPES  | 82JON 01  |
| 22               |       |     | CVA    | 82GLA 02  | 5.9              | 0.2   | 11  | ICPES  | 82JON 01  |
| <u>I (ng/g)</u>  |       |     |        |           | 6                | 0.2   | 11  | ICPES  | 82JON 01  |
| 32               |       |     | IENA   | 84GLA 11  | <u>P (%)</u>     |       |     |        |           |
| 60               | 20    |     | IENA   | 82SAT 01  | 1                | 0.04  | 11  | ICPES  | 82JON 01  |
| <u>K (%)</u>     |       |     |        |           | 1.02             | 0.03  | 11  | ICPES  | 82JON 01  |
| 1.4              | 0.1   | 11  | ICPES  | 82JON 01  | 1.04             | 0.05  | 11  | ICPES  | 82JON 01  |
| 1.45             | 0.007 | 11  | ICPES  | 82JON 01  | 1.08             | 0.04  | 11  | ICPES  | 82JON 01  |
| 1.45             | 0.05  | 11  | ICPES  | 82JON 01  | <u>Pb (ng/g)</u> |       |     |        |           |
| 1.55             | 0.05  |     | ITNA   | 78BER 01  | 200              | 200   | 11  | ICPES  | 82JON 01  |
| 1.59             | 0.04  | 11  | ICPES  | 82JON 01  | 500              | 500   | 11  | ICPES  | 82JON 01  |
| 1.71             | 0.12  |     | ITNA   | 79KOB 03  | <u>Rb (ug/g)</u> |       |     |        |           |
| <u>Li (ng/g)</u> |       |     |        |           | 16               | 1     |     | ITNA   | 78BER 01  |
| 440              | 20    |     | AAC    | 85GAU 04  | <u>S (ug/g)</u>  |       |     |        |           |
| <u>Mg (ug/g)</u> |       |     |        |           | 4100             | 90    |     | CB     | 86BOW 01  |
| 1730             | 70    | 11  | ICPES  | 82JON 01  | 4140             | 120   |     | WXRF   | 86BOW 01  |
| 1780             | 100   |     | ITNA   | 78BER 01  | 4170             | 120   |     | CB     | 84GLA 11  |
| 1870             | 50    | 11  | ICPES  | 82JON 01  | <u>Sb (ng/g)</u> |       |     |        |           |
| 1900             | 60    | 11  | ICPES  | 82JON 01  | 75               | 5     |     | ITNA   | 78BER 01  |
| 1980             | 60    | 11  | ICPES  | 82JON 01  | 230              | 50    |     | ITNA   | 79KOB 03  |
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Sc (ng/g)</u> |       |     |        |           |
| 7                | 0.8   |     | ITNA   | 78BER 01  | 170              | 9     |     | ITNA   | 86GAU 01  |
| 9.1              | 0.6   | 11  | ICPES  | 82JON 01  | 170              | 14    |     | ITNA   | 84GLA 11  |
| 9.6              | 0.6   | 11  | ICPES  | 82JON 01  | 180              | 10    |     | ITNA   | 78BER 01  |
| 10               | 1.5   |     | ITNA   | 79KOB 03  | 196              |       |     | ITNA   | 85GAU 04  |
| 10.4             | 0.8   | 11  | ICPES  | 82JON 01  | 220              | 30    |     | ITNA   | 79KOB 03  |
| 10.9             | 0.7   | 11  | ICPES  | 82JON 01  | <u>Se (ug/g)</u> |       |     |        |           |
| <u>Mo (ug/g)</u> |       |     |        |           | 0.92             | 0.09  |     | ITNA   | 78BER 01  |
| 3.3              | 0.3   | 11  | ICPES  | 82JON 01  | 0.98             | 0.05  | 11  | HAA    | 82JON 01  |
| 3.4              | 0.1   | 11  | ICPES  | 82JON 01  | 1.01             | 0.06  | 11  | HAA    | 82JON 01  |
| 3.8              | 0.2   | 11  | ICPES  | 82JON 01  |                  |       |     |        |           |
| 3.9              | 0.2   | 11  | ICPES  | 82JON 01  |                  |       |     |        |           |

TABLE 1569-2: INDIVIDUAL DATA FOR NBS SRM 1569 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                     | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|--------------------------|-------|-----|--------|-----------|
| <u>Sr (ug/g)</u> |       |     |        |           | <u>U-235/238 (ratio)</u> |       |     |        |           |
| 10.3             |       |     | IENA   | 85GAU 04  | 7.26                     | 0.07  | 28  | IDMS   | 82CUR 01  |
| <u>Th (ug/g)</u> |       |     |        |           | <u>V (ug/g)</u>          |       |     |        |           |
| 3.7              | 0.2   |     | ITNA   | 78BER 01  | 1.46                     | 0.05  | 11  | ICPES  | 82JON 01  |
| <u>Ti (ug/g)</u> |       |     |        |           | 4.1                      | 0.1   |     | ITNA   | 78BER 01  |
| 38               | 2     |     | ITNA   | 78BER 01  | 4.4                      | 0.1   | 11  | ICPES  | 82JON 01  |
| <u>U (ng/g)</u>  |       |     |        |           | <u>Zn (ug/g)</u>         |       |     |        |           |
| 441              | 4     |     | IDMS   | 82CUR 01  | 30                       | 4.3   |     | ITNA   | 79KOB 03  |
| 460              | 20    | 35  | DNA    | 81GLA 03  | 59                       | 6     | 11  | ICPES  | 82JON 01  |
| 470              | 20    |     | DNA    | 84GLA 02  | 63                       | 2     | 11  | ICPES  | 82JON 01  |
| 470              | 20    |     | DNA    | 82GLA 02  | 64                       | 4     | 11  | ICPES  | 82JON 01  |
| 470              | 20    | 35  | DNA    | 80GLA 04  | 64                       | 5     | 11  | ICPES  | 82JON 01  |
| 470              | 50    | 35  | DNA    | 81GLA 04  | 65                       | 2     | 11  | ICPES  | 82JON 01  |
| 490              | 20    |     | ITNA   | 78BER 01  | 65                       | 2     | 11  | ICPES  | 82JON 01  |
| 490              | 30    |     | DNA    | 84GLA 11  | 66                       | 2     | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 70                       | 2     |     | ITNA   | 78BER 01  |
|                  |       |     |        |           | 70                       | 4     | 11  | ICPES  | 82JON 01  |

TABLE 1570-1: COMPILED DATA FOR NBS SRM 1570 SPINACH (revised 3/1/86)

| ELE  | UNITS | NBS         |      | CONSENSUS   |      | MEDIAN | RANGE        | AA          |      | NAA         |      | ICPES       |      | OTHER METHODS |               |
|------|-------|-------------|------|-------------|------|--------|--------------|-------------|------|-------------|------|-------------|------|---------------|---------------|
|      |       | Mean ± SD   | (n)  | Mean ± SD   | (n)  |        |              | Mean ± SD   | (n)  | Mean ± SD   | (n)  | Mean ± SD   | (n)  | Method        | Mean          |
| Ag   | ng/g  | ---         | (2)  | 65          | (2)  | ---    | 65 - 65      | 65          | (1)  | 65          | (1)  | ---         | ---  | ---           | ---           |
| Al   | ug/g  | 870 ± 50    | (13) | 810 ± 90    | (13) | 824    | 609 - 909    | 861         | (1)  | 856 ± 36    | (6)  | 700 ± 150   | (8)  | ---           | ---           |
| As   | ng/g  | 150 ± 50    | (18) | 153 ± 20    | (18) | 150    | 114 - 180    | 158 ± 13    | (8)  | 147 ± 23    | (7)  | 170         | (1)  | ---           | 170 (1) COLOR |
| Au   | ng/g  | ---         | (2)  | 1.2         | (2)  | ---    | 0.4 - 2      | ---         | (2)  | 1.2         | (2)  | ---         | ---  | ---           | ---           |
| B    | ug/g  | 30          | (5)  | 27.7 ± 0.6  | (5)  | 27.6   | 27 - 28.5    | ---         | (4)  | ---         | (4)  | 27.6 ± 0.7  | (4)  | ---           | 28 (1) TCGS   |
| Ba   | ug/g  | ---         | (3)  | 14.9 ± 2.5  | (3)  | 13.9   | 13.1 - 17.8  | ---         | (1)  | 13.1        | (1)  | 15.8        | (2)  | ---           | ---           |
| Be   | ng/g  | ---         | (1)  | 16          | (1)  | ---    | ---          | ---         | (1)  | ---         | (1)  | 16          | (1)  | ---           | ---           |
| Bi   | ng/g  | ---         | (8)  | < 8         | (8)  | ---    | ---          | ---         | (13) | ---         | (13) | < 8         | (1)  | ---           | ---           |
| Br   | ug/g  | 54          | (14) | 48 ± 4      | (14) | 47     | 42.4 - 55.3  | ---         | (13) | 48 ± 4      | (13) | ---         | (1)  | 51.1          | XRF           |
| C    | %     | ---         | (2)  | 40.76       | (2)  | ---    | 40.7 - 40.82 | ---         | (3)  | ---         | (3)  | ---         | (14) | ---           | 40.76 (2) CB  |
| Ca   | %     | 1.35 ± 0.03 | (21) | 1.33 ± 0.08 | (21) | 1.347  | 1.19 - 1.49  | 1.21        | (1)  | 1.44 ± 0.06 | (3)  | 1.32 ± 0.06 | (14) | 1.30          | XRF           |
| Cd   | ug/g  | 1.5         | (30) | 1.43 ± 0.14 | (30) | 1.42   | 1.2 - 1.7    | 1.41 ± 0.16 | (10) | 1.51 ± 0.12 | (5)  | 1.5 ± 0.2   | (12) | 1.25 ± 0.06   | (3) ASV       |
| Ce   | ng/g  | ---         | (2)  | 456         | (2)  | ---    | 240 - 671    | ---         | (2)  | 456         | (2)  | ---         | ---  | ---           | ---           |
| Cl   | ug/g  | ---         | (6)  | 6600 ± 410  | (6)  | 6500   | 6000 - 7000  | ---         | (5)  | 6620 ± 450  | (5)  | ---         | (1)  | 6500          | XRF           |
| Co   | ug/g  | 1.5         | (12) | 1.56 ± 0.12 | (12) | 1.5    | 1.41 - 1.76  | 1.51 ± 0.12 | (3)  | 1.58 ± 0.12 | (8)  | 1.5         | (1)  | ---           | ---           |
| Cr   | ug/g  | 4.6 ± 0.3   | (25) | 4.3 ± 0.5   | (25) | 4.4    | 3.33 - 5.2   | 4.6 ± 0.6   | (7)  | 4.6 ± 0.4   | (7)  | 3.9 ± 0.5   | (9)  | 5.2           | (1) AE±AF     |
| Cr   | ug/g  | ---         | (4)  | ---         | (4)  | ---    | ---          | ---         | (4)  | ---         | (4)  | ---         | (1)  | 3.9           | (1) POL       |
| Cs   | ng/g  | ---         | (45) | 61 ± 9      | (45) | 63     | 48 - 68      | ---         | (8)  | 61 ± 9      | (8)  | ---         | (17) | ---           | ---           |
| Cu   | ug/g  | 12 ± 2      | (45) | 11.8 ± 0.7  | (45) | 11.8   | 10.2 - 13.2  | 12.2 ± 0.6  | (10) | 11.6 ± 0.4  | (8)  | 11.6 ± 0.8  | (17) | 11.6          | (2) XRF       |
| Cu   | ug/g  | ---         | (3)  | ---         | (3)  | ---    | ---          | ---         | (3)  | ---         | (3)  | ---         | (1)  | 10.8          | (1) ASV       |
| Cu   | ug/g  | ---         | (2)  | ---         | (2)  | ---    | ---          | ---         | (4)  | ---         | (4)  | ---         | (2)  | 12.1          | (2) COLOR     |
| Cu   | ug/g  | ---         | (36) | ---         | (36) | ---    | ---          | ---         | (6)  | ---         | (6)  | ---         | (1)  | 11.5          | (1) FAE       |
| Eu   | ng/g  | 20          | (3)  | 15 ± 4      | (3)  | 14     | 11 - 20      | ---         | (3)  | 15 ± 4      | (3)  | ---         | ---  | ---           | ---           |
| F    | ug/g  | ---         | (2)  | 4.35        | (2)  | ---    | 4.3 - 4.4    | ---         | (8)  | ---         | (8)  | ---         | (15) | ---           | ---           |
| Fe   | ug/g  | 550 ± 20    | (36) | 540 ± 30    | (36) | 541    | 478 - 601    | 543 ± 27    | (9)  | 555 ± 30    | (6)  | 524 ± 30    | (15) | 543 ± 48      | (3) XRF       |
| Fe   | ug/g  | ---         | (1)  | ---         | (1)  | ---    | ---          | ---         | (1)  | ---         | (1)  | ---         | (1)  | 548           | (1) NM        |
| Gd   | ng/g  | ---         | (1)  | 60          | (1)  | ---    | ---          | ---         | (1)  | 60          | (1)  | ---         | ---  | ---           | ---           |
| Ge   | ng/g  | ---         | (2)  | < 20        | (2)  | ---    | ---          | ---         | (8)  | ---         | (8)  | < 20        | ---  | ---           | ---           |
| H    | %     | ---         | (2)  | 5.57        | (2)  | ---    | 5.54 - 5.6   | ---         | (4)  | ---         | (4)  | ---         | (1)  | 5.54          | (1) CB        |
| H2O- | %     | ---         | (1)  | 6           | (1)  | ---    | ---          | ---         | (1)  | ---         | (1)  | ---         | ---  | ---           | ---           |
| Hf   | ng/g  | ---         | (1)  | 40          | (1)  | ---    | ---          | ---         | (1)  | 40          | (1)  | ---         | ---  | ---           | ---           |
| Hg   | ng/g  | 30 ± 5      | (6)  | 30 ± 4      | (6)  | 29     | 25 - 34      | 29 ± 3      | (4)  | 30          | (2)  | ---         | ---  | ---           | ---           |
| I    | ug/g  | ---         | (6)  | 1.20 ± 0.12 | (6)  | 1.1    | 1.08 - 1.325 | ---         | (4)  | 1.25 ± 0.12 | (4)  | ---         | (1)  | 1.08          | (1) MS        |
| In   | ng/g  | ---         | (2)  | 1.25        | (2)  | ---    | 1.2 - 1.3    | ---         | (2)  | 1.25        | (2)  | ---         | ---  | ---           | ---           |
| K    | %     | 3.56 ± 0.03 | (25) | 3.56 ± 0.15 | (25) | 3.59   | 3.26 - 3.9   | 3.51 ± 0.15 | (4)  | 3.55 ± 0.16 | (8)  | 3.59 ± 0.08 | (11) | 4.03          | (2) XRF       |
| La   | ng/g  | 370         | (7)  | 340 ± 40    | (7)  | 350    | 260 - 400    | ---         | (5)  | 340 ± 50    | (5)  | ---         | ---  | ---           | 332 (2) NM    |
| Li   | ug/g  | ---         | (2)  | 1.98        | (2)  | ---    | 1.93 - 2.04  | 2.04        | (1)  | ---         | (1)  | 1.93        | (1)  | ---           | ---           |

TABLE 1570-1: COMPILED DATA FOR NBS SRM 1570 SPINACH (cont.)

| ELE | UNITS | NBS        |      | CONSENSUS   |      | MEDIAN | RANGE       | AA          |      | NAA         |     | ICPES       |      | OTHER METHODS |           |
|-----|-------|------------|------|-------------|------|--------|-------------|-------------|------|-------------|-----|-------------|------|---------------|-----------|
|     |       | Mean ± SD  | (n)  | Mean ± SD   | (n)  |        |             | Mean ± SD   | (n)  | Mean ± SD   | (n) | Mean ± SD   | (n)  | Method        | (n)       |
| Lu  | ng/g  | ---        | (1)  | 3           | (1)  | ---    | ---         | ---         | (1)  | ---         | (1) | ---         | ---  | ---           | ---       |
| Mg  | ug/g  | ---        | (19) | 8650 ± 310  | (19) | 8600   | 7800 - 9200 | 8770 ± 400  | (3)  | 8150        | (2) | 8660 ± 200  | (14) | ---           | ---       |
| Mn  | ug/g  | 165 ± 6    | (39) | 164 ± 6     | (39) | 165    | 155 - 178   | 162 ± 6     | (10) | 163 ± 5     | (7) | 165 ± 6     | (18) | 170 ± 12      | (3) XRF   |
| Mn  | ug/g  | ---        | (7)  | ---         | (7)  | ---    | ---         | ---         | (7)  | ---         | (7) | ---         | (18) | 188           | (1) PAA   |
| Mo  | ng/g  | ---        | (7)  | 300 ± 80    | (7)  | 300    | 200 - 420   | ---         | (4)  | 360         | (2) | 275 ± 95    | (4)  | ---           | ---       |
| N   | %     | 5.9        | (3)  | 5.6 ± 0.3   | (3)  | 5.62   | 5.31 - 6    | ---         | (4)  | ---         | (4) | ---         | (4)  | ---           | ---       |
| Na  | %     | ---        | (17) | 1.42 ± 0.10 | (17) | 1.43   | 1.24 - 1.56 | 1.560       | (2)  | 1.41 ± 0.10 | (8) | 1.38 ± 0.10 | (7)  | 5.62          | (1) CB    |
| Nd  | ng/g  | ---        | (1)  | 306         | (1)  | ---    | ---         | ---         | (7)  | 306         | (1) | ---         | (7)  | ---           | ---       |
| Ni  | ug/g  | 6          | (24) | 5.6 ± 0.7   | (24) | 5.51   | 4.1 - 7.5   | 6.5 ± 1.4   | (3)  | 6.2 ± 1.4   | (4) | 5.5 ± 0.6   | (13) | 5.3           | (2) XRF   |
| Ni  | ug/g  | ---        | (24) | ---         | (24) | ---    | ---         | ---         | (3)  | ---         | (4) | ---         | (13) | 6.1           | (1) PAA   |
| P   | ug/g  | 5500 ± 200 | (24) | 5240 ± 310  | (24) | 5300   | 4530 - 5700 | 5420 ± 220  | (4)  | ---         | (4) | 5160 ± 310  | (17) | 5065          | (2) COLOR |
| P   | ug/g  | ---        | (24) | ---         | (24) | ---    | ---         | ---         | (4)  | ---         | (4) | ---         | (17) | ---           | ---       |
| Pb  | ug/g  | 1.2 ± 0.2  | (27) | 1.19 ± 0.25 | (27) | 1.16   | 0.8 - 2     | 1.19 ± 0.12 | (17) | ---         | (2) | 1.5 ± 0.7   | (6)  | 1.10 ± 0.10   | (4) ASV   |
| Pb  | ug/g  | ---        | (27) | ---         | (27) | ---    | ---         | ---         | (17) | ---         | (2) | ---         | (6)  | 2.0           | (1) PAA   |
| Pd  | ng/g  | ---        | (1)  | < 2         | (1)  | ---    | ---         | ---         | (17) | < 2         | (1) | ---         | (6)  | ---           | ---       |
| Pr  | ng/g  | ---        | (1)  | < 60        | (1)  | ---    | ---         | ---         | (17) | < 60        | (1) | ---         | (6)  | ---           | ---       |
| Rb  | ug/g  | 12.1 ± 0.2 | (6)  | 11.5 ± 0.9  | (6)  | 11.32  | 10 - 12.7   | 12.45       | (2)  | 11.0 ± 0.7  | (4) | ---         | (4)  | ---           | ---       |
| S   | ug/g  | ---        | (7)  | 4350 ± 470  | (7)  | 4440   | 3600 - 4860 | ---         | (2)  | ---         | (4) | 4317        | (2)  | 4320 ± 530    | (4) CB    |
| Sb  | ng/g  | 40         | (7)  | 40 ± 9      | (7)  | 40     | 27 - 50     | ---         | (2)  | 40 ± 9      | (7) | ---         | (2)  | ---           | ---       |
| Sc  | ng/g  | 160        | (9)  | 166 ± 11    | (9)  | 170    | 150 - 180   | ---         | (2)  | 166 ± 11    | (9) | ---         | (2)  | ---           | ---       |
| Se  | ng/g  | ---        | (9)  | 40 ± 14     | (9)  | 37     | 24 - 66     | 33.95       | (2)  | 48 ± 19     | (4) | ---         | (2)  | 37            | (1) FLUOR |
| Si  | ug/g  | ---        | (1)  | 2900        | (1)  | ---    | ---         | ---         | (2)  | ---         | (4) | 2900        | (1)  | ---           | ---       |
| Sm  | ng/g  | ---        | (3)  | 56 ± 24     | (3)  | 54     | 33 - 80     | ---         | (2)  | 56 ± 24     | (3) | ---         | (1)  | ---           | ---       |
| Sn  | ug/g  | ---        | (1)  | 3.1         | (1)  | ---    | ---         | ---         | (2)  | ---         | (3) | 3.1         | (1)  | ---           | ---       |
| Sr  | ug/g  | 87 ± 2     | (7)  | 80 ± 5      | (7)  | 82.5   | 72.5 - 87   | 85.35       | (2)  | 83.4        | (1) | 77          | (2)  | 72.5          | (1) XRF   |
| Ta  | ug/g  | ---        | (1)  | 0.23        | (1)  | ---    | ---         | ---         | (2)  | 0.23        | (1) | ---         | (2)  | ---           | ---       |
| Tb  | ng/g  | ---        | (1)  | 8           | (1)  | ---    | ---         | ---         | (2)  | 8           | (1) | ---         | (2)  | ---           | ---       |
| Th  | ng/g  | 120 ± 30   | (2)  | 130         | (2)  | ---    | 110 - 150   | ---         | (2)  | 130         | (2) | ---         | (3)  | ---           | ---       |
| Ti  | ug/g  | ---        | (3)  | 18 ± 10     | (3)  | 16.5   | 8.9 - 28    | ---         | (2)  | ---         | (3) | 18 ± 10     | (3)  | ---           | ---       |
| Tl  | ng/g  | 30         | (1)  | 31          | (1)  | ---    | ---         | ---         | (2)  | ---         | (3) | ---         | (3)  | ---           | ---       |
| U   | ng/g  | 46 ± 9     | (4)  | 46 ± 3      | (4)  | 45     | 42 - 48     | ---         | (2)  | 46 ± 3      | (4) | ---         | (3)  | ---           | ---       |
| V   | ug/g  | ---        | (12) | 1.20 ± 0.16 | (12) | 1.2    | 0.928 - 1.5 | ---         | (7)  | 1.11 ± 0.10 | (7) | 1.37 ± 0.11 | (3)  | 1.44          | (1) COLOR |
| W   | ng/g  | ---        | (1)  | 140         | (1)  | ---    | ---         | ---         | (7)  | 140         | (1) | ---         | (3)  | ---           | ---       |
| Yb  | ng/g  | ---        | (2)  | 12.5        | (2)  | ---    | 2 - 23      | ---         | (2)  | 12.5        | (2) | ---         | (3)  | ---           | ---       |
| Zn  | ug/g  | 50 ± 2     | (43) | 50 ± 4      | (43) | 50     | 42 - 60.1   | 52 ± 4      | (8)  | 49 ± 5      | (7) | 49.3 ± 2.5  | (22) | 60 ± 7        | (3) XRF   |
| Zn  | ug/g  | ---        | (43) | ---         | (43) | ---    | ---         | ---         | (8)  | ---         | (7) | ---         | (22) | 49.2          | (1) PAA   |
| Zn  | ug/g  | ---        | (43) | ---         | (43) | ---    | ---         | ---         | (8)  | ---         | (7) | ---         | (22) | 49.5          | (1) SSMS  |

TABLE 1570-1: COMPILED DATA FOR NBS SRM 1570 SPINACH (cont.)

| COMPOUND            | CAS # | UNITS | NBS | CONSENSUS<br>Mean (n) |
|---------------------|-------|-------|-----|-----------------------|
| Total Folates       | ---   | ug/g  | --- | 5.3 (1)               |
| Total Pantothenates | ---   | ug/g  | --- | 14.3 (1)              |
| Thiamine            | ---   | ug/g  | --- | 5.6 (1)               |
| Protein             | ---   | %     | --- | 33.2 (1)              |
| Nicotinic Acid      | 59676 | ug/g  | --- | 42.4 (1)              |
| Vitamin B-6         | 65236 | ug/g  | --- | 12.1 (1)              |
| Riboflavin          | 83885 | ug/g  | --- | 17.6 (1)              |

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (revised 3/1/86)

| Conc                              | Uncer | Com | Method | Reference | Conc             | Uncer  | Com | Method | Reference |
|-----------------------------------|-------|-----|--------|-----------|------------------|--------|-----|--------|-----------|
| <u>Total Folates (ug/g)</u>       |       |     |        |           | <u>As (ng/g)</u> |        |     |        |           |
| 5.3                               |       |     | VV     | 85TAN 01  | 62               | 13     | 7   | FAA    | 82HOE 02  |
| <u>Total Pantothenates (ug/g)</u> |       |     |        |           | 114              |        |     | HAA    | 77IHN 01  |
| 14.3                              |       |     | VV     | 85TAN 01  | 120              | 10     | 7   | RTNA   | 80GAL 02  |
| <u>Thiamine (ug/g)</u>            |       |     |        |           | 120              | 70     |     | ITNA   | 85NDI 01  |
| 5.6                               |       |     | VV     | 85TAN 01  | 140              | 10     |     | AA     | 83RAP 01  |
| <u>Protein (%)</u>                |       |     |        |           | 146              |        |     | RTNA   | 85TIA 01  |
| 33.2                              |       |     | VV     | 85TAN 01  | 147              | 1      |     | RTNA   | 79HOE 01  |
| <u>Nicotinic acid (ug/g)</u>      |       |     |        |           | 149              | 25     |     | RTNA   | 85GAU 04  |
| 42.4                              |       |     | VV     | 85TAN 01  | 150              | 10     | 11  | HAA    | 82JON 01  |
| <u>Vitamin B-6 (ug/g)</u>         |       |     |        |           | 150              | 13     | 7   | FAA    | 82HOE 02  |
| 12.1                              |       |     | VV     | 85TAN 01  | 152              | 5      | 7   | FAA    | 82HOE 02  |
| <u>Riboflavin (ug/g)</u>          |       |     |        |           | 160              |        |     | FAA    | 78CAP 01  |
| 17.6                              |       |     | VV     | 85TAN 01  | 160              | 10     | 11  | HAA    | 82JON 01  |
| <u>Ag (ng/g)</u>                  |       |     |        |           | 170              | 10     | H   | ICPES  | 82HAH 01  |
| 65                                | 10    |     | RTNA   | 80SLO 01  | 170              | 10     |     | COLOR  | 77BUR 01  |
| 65                                | 40    |     | AA     | 80JAC 01  | 170              | 20     |     | FAA    | 80DUP 01  |
| <u>Al (ug/g)</u>                  |       |     |        |           | 170              | 40     |     | RTNA   | 80SLO 01  |
| 366                               | 48    | 11  | ICPES  | 81MUN 01  | 180              | 20     |     | HAA    | 80TAM 01  |
| 402.6                             | 23.2  | 6   | COLOR  | 85BAR 01  | 180              | 70     |     | IENA   | 82GLA 02  |
| 412.7                             | 24.8  | 6   | COLOR  | 85BAR 01  | <u>Au (ng/g)</u> |        |     |        |           |
| 482                               |       |     | ICPES  | 78CAP 01  | 0.4              |        |     | RTNA   | 80SLO 01  |
| 536                               |       |     | ICPES  | 81GOO 01  | 2                | 0.0004 |     | ITNA   | 79REN 03  |
| 609                               | 16    | 11  | ICPES  | 81MUN 01  | <u>B (ug/g)</u>  |        |     |        |           |
| 620                               | 36    |     | ICPES  | 83SCH 03  | 20.9             | 0.3    |     | ICPES  | 79HER 01  |
| 782                               | 31    | 11  | ICPES  | 82JON 01  | 27               | 3.5    |     | ICPES  | 84PRI 01  |
| 819                               | 30    |     | ICPES  | 84ABD 01  | 27.2             | 0.8    | 11  | ICPES  | 81MUN 01  |
| 820                               | 25    |     | ITNA   | 84GLA 02  | 27.6             | 1.3    | 11  | ICPES  | 81MUN 01  |
| 824                               | 10    |     | ITNA   | 80SLO 01  | 28               | 0.4    |     | TCGS   | 82GLA 02  |
| 829                               | 23    |     | ITNA   | 77NAD 02  | 28.5             |        |     | ICPES  | 81GOO 01  |
| 854                               | 25    |     | ICPES  | 83SCH 04  | <u>Ba (ug/g)</u> |        |     |        |           |
| 861                               | 30    |     | AA     | 83RAP 01  | <                | 45     | L   | ITNA   | 78CAP 01  |
| 865                               | 47    |     | ICPES  | 84NAD 01  | 13.1             | 1.8    |     | ITNA   | 77NAD 02  |
| 870                               |       |     | ITNA   | 84GLA 11  | 13.9             | 0.7    |     | ICPES  | 85WHI 02  |
| 881                               |       |     | ITNA   | 78CAP 01  | 17.8             | 2      |     | ICPES  | 84NAD 01  |
| 909                               | 11    |     | IENA   | 85GLA 02  | 87               | 29     |     | ITNA   | 79REN 03  |
| 1190                              |       | 35  | ITNA   | 81GLA 03  | <u>Be (ng/g)</u> |        |     |        |           |
|                                   |       |     |        |           | <                | 30     | L   | ICPES  | 82KUE 01  |
|                                   |       |     |        |           | <                | 30     | L   | ICPES  | 82KUE 01  |
|                                   |       |     |        |           | <                | 30     | L   | ICPES  | 82KUE 01  |
|                                   |       |     |        |           | <                | 60     | L   | ICPES  | 78CAP 01  |
|                                   |       |     |        |           | <                | 80     |     | ICPES  | 84WOL 02  |
|                                   |       |     |        |           | 16               | 6      |     | ICPES  | 83SCH 03  |

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Bi (ng/g)</u> |       |     |        |           | <u>Ca (%) cont.</u> |       |     |        |           |
| <                | 8     | L   | ICPES  | 82HAH 01  | 1.49                | 0.1   |     | ITNA   | 77NAD 02  |
|                  |       |     |        |           | 1.54                | 0.01  |     | ICPES  | 79HER 01  |
| <u>Br (ug/g)</u> |       |     |        |           |                     |       |     | ICPES  | 78CAP 01  |
| 42.4             | 2.4   | 5   | ITNA   | 80HOE 01  | 1.78                | 0.25  |     | ITNA   | 79REN 03  |
| 43.6             | 2.3   | 5   | IENA   | 79GLA 02  | 2.45                |       |     | EXRF   | 81PAR 01  |
| 45               |       |     | ITNA   | 84GLA 11  | <u>Cd (ug/g)</u>    |       |     |        |           |
| 45               | 3.3   |     | ITNA   | 80SLO 01  | 1.2                 |       |     | FAA    | 80PRE 01  |
| 45.1             | 0.3   | 5   | IENA   | 79GLA 02  | 1.2                 | 0.05  |     | FAA    | 84KUR 01  |
| 46               | 2     | 5   | ITNA   | 80HOE 01  | 1.2                 | 0.15  |     | ASV    | 82GAJ 01  |
| 47               | 4     |     | ITNA   | 84GLA 02  | 1.23                | 0.16  |     | ASV    | 82SAT 02  |
| 47.2             | 0.5   |     | ITNA   | 77NAD 02  | 1.3                 |       |     | FAA    | 82PRE 01  |
| 48               |       |     | ITNA   | 78CAP 01  | 1.3                 | 0.05  |     | AA     | 83RAP 01  |
| 48               | 9.4   |     | ITNA   | 79REN 03  | 1.3                 | 0.2   | 11  | ICPES  | 81MUN 01  |
| 51.1             | 2.5   |     | CPXRF  | 84BIS 01  | 1.32                |       |     | ASV    | 78CAP 01  |
| 52               | 4.8   |     | ITNA   | 79KOB 03  | 1.38                | 0.08  |     | RTNA   | 80SLO 01  |
| 54               | 3     | 35  | NAA    | 81GLA 03  | 1.39                | 0.11  |     | ICPES  | 82EVA 01  |
| 55.3             | 3.8   | 5   | ITNA   | 80TOU 01  | 1.4                 | 0.08  | 11  | ICPES  | 82JON 01  |
| 138              |       |     | EXRF   | 81PAR 01  | 1.4                 | 0.1   |     | ICPES  | 83SCH 04  |
| <u>C (%)</u>     |       |     |        |           | 1.4                 | 0.1   |     | ICPES  | 84ABD 01  |
| 40.7             | 1     |     | CB     | 77WAT 02  | 1.4                 | 0.14  |     | AA     | 82EVA 01  |
| 40.82            | 0.81  |     | CB     | 80SCH 02  | 1.4                 | 0.2   |     | ICPES  | 83SCH 03  |
| <u>Ca (%)</u>    |       |     |        |           | 1.41                | 0.03  | 6   | ICPES  | 82KUE 01  |
| 0.82             | 0.11  |     | ITNA   | 80SLO 01  | 1.42                | 0.03  | 6   | ICPES  | 82KUE 01  |
| 0.85             | 0.01  |     | CPXRF  | 84BIS 01  | 1.45                | 0.07  | 6   | ICPES  | 82KUE 01  |
| 0.99             | 0.05  |     | ICPES  | 84ABD 01  | 1.46                | 0.02  |     | NAA    | 76DER 01  |
| 1.19             | 0.09  | 6   | EXRF   | 79MAT 01  | 1.46                | 0.04  |     | FAA    | 80LEG 01  |
| 1.21             |       | 35  | AA     | 81GLA 04  | 1.47                | 0.12  |     | FAA    | 83DEL 01  |
| 1.22             | 0.02  |     | ICPES  | 84WOL 02  | 1.48                |       |     | RTNA   | 85TIA 01  |
| 1.24             | 0.08  | 11  | ICPES  | 82JON 01  | 1.49                | 0.08  | 11  | ICPES  | 82JON 01  |
| 1.25             | 0.01  | 11  | ICPES  | 82JON 01  | 1.5                 | 0.3   |     | AA     | 84KAN 01  |
| 1.29             | 0.03  | 6   | ICPES  | 82KUE 01  | 1.52                | 0.07  |     | RTNA   | 77DER 01  |
| 1.29             | 0.04  | 11  | ICPES  | 81MUN 01  | 1.6                 | 0.2   |     | FAA    | 81KNA 01  |
| 1.3              |       |     | ICPES  | 81GOO 01  | 1.67                | 0.29  |     | SSMS   | 77PAU 01  |
| 1.34             | 0.07  |     | ICPES  | 85WHI 02  | 1.7                 | 0.1   |     | RTNA   | 76GAL 01  |
| 1.34             | 0.23  |     | ICPES  | 84NAD 01  | 1.7                 | 0.2   | D   | FAA    | 80SCH 08  |
| 1.347            | 0.014 |     | NM     | 81YUZ 01  | 1.7                 | 0.2   |     | AA     | 80SCH 05  |
| 1.35             | 0.025 | 6   | ICPES  | 82KUE 01  | 1.7                 | 0.3   | 11  | ICPES  | 81MUN 01  |
| 1.35             | 0.06  | 11  | ICPES  | 81MUN 01  | 2                   | 0.1   |     | AA     | 76GAL 01  |
| 1.36             | 0.04  | 11  | ICPES  | 82JON 01  | 2.1                 | 0.2   |     | ICPES  | 79HER 01  |
| 1.37             | 0.07  | 5   | ITNA   | 80TOU 01  | 2.2                 | 1     | 11  | ICPES  | 82JON 01  |
| 1.38             | 0.014 | 6   | ICPES  | 82KUE 01  | 2.8                 | 0.1   | 11  | ICPES  | 82JON 01  |
| 1.39             | 0.03  | 11  | ICPES  | 82JON 01  | <u>Ce (ng/g)</u>    |       |     |        |           |
| 1.4              | 0.04  | 6   | EXRF   | 79MAT 01  | 240                 | 30    |     | RTNA   | 80SLO 01  |
| 1.44             | 0.035 |     | ICPES  | 83SCH 03  | 671                 | 162   |     | RTNA   | 83TJI 01  |
| 1.46             |       |     | ITNA   | 78CAP 01  |                     |       |     |        |           |

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cl (ug/g)</u> |       |     |        |           | <u>Cr (ug/g) cont.</u> |       |     |        |           |
| 6000             |       | 35  | ITNA   | 81GLA 04  | 4.7                    | 0.3   |     | DCPES  | 79REE 01  |
| 6290             |       |     | ITNA   | 78CAP 01  | 4.7                    | 0.3   | D   | DCPES  | 81REE 01  |
| 6500             | 300   |     | CPXRF  | 79REN 02  | 4.7                    | 0.4   |     | ITNA   | 82GLA 02  |
| 6800             | 100   |     | ITNA   | 80SLO 01  | 4.8                    |       |     | ITNA   | 78CAP 01  |
| 7000             |       |     | ITNA   | 84GLA 11  | 5.2                    | 0.5   |     | ITNA   | 76GAL 01  |
| 7000             | 120   |     | ITNA   | 84GLA 02  | 5.2                    | 1.5   |     | AE+AF  | 82GOL 01  |
| 10000            | 1000  |     | ITNA   | 77NAD 02  | 5.8                    | 0.2   |     | AA     | 76GAL 01  |
|                  |       |     |        |           | 6                      | 0.7   |     | PAA    | 80YAM 01  |
|                  |       |     |        |           | 6.2                    | 0.1   |     | ICPES  | 79HER 01  |
|                  |       |     |        |           | 7.5                    | 1.6   |     | ITNA   | 79REN 03  |
| 0.9              | 0.1   |     | PAA    | 80YAM 01  | 20.5                   | 2.8   | 11  | RTNA   | 76STE 01  |
| 1.41             |       |     | ITNA   | 78CAP 01  | 21                     | 2     |     | RTNA   | 77MEL 01  |
| 1.42             | 0.1   |     | AA     | 83RAP 01  | 21.3                   | 2.6   | 11  | RTNA   | 76STE 01  |
| 1.47             | 0.1   |     | AA     | 80JAC 01  | 21.8                   | 1.5   | 11  | RTNA   | 76STE 01  |
| 1.49             | 0.05  |     | RTNA   | 80SLO 01  | 23.9                   | 0.9   | 11  | RTNA   | 76STE 01  |
| 1.5              | 0.1   |     | ITNA   | 79KOB 03  | 24.5                   | 1.2   | 11  | RTNA   | 76STE 01  |
| 1.5              | 0.2   |     | ITNA   | 79REN 03  | 24.8                   | 2.8   |     | ITNA   | 76STE 01  |
| 1.5              | 0.4   |     | ICPES  | 84ABD 01  |                        |       |     |        |           |
| 1.6              | 0.1   | 5   | ITNA   | 80TOU 01  | <u>Cs (ng/g)</u>       |       |     |        |           |
| 1.65             |       |     | FAA    | 82HOE 01  |                        |       |     |        |           |
| 1.68             | 0.03  |     | RTNA   | 77MEL 01  | <                      | 200   | L   | ITNA   | 82GLA 02  |
| 1.7              | 0.1   |     | ITNA   | 76GAL 01  | 48                     | 5     |     | ITNA   | 77NAD 02  |
| 1.76             | 0.01  |     | ITNA   | 77NAD 02  | 63                     | 3     |     | ITNA   | 84GLA 11  |
| 3.2              | 0.2   |     | AA     | 76GAL 01  | 64                     | 2     |     | ITNA   | 84GLA 02  |
|                  |       |     |        |           | 68                     | 8     |     | ITNA   | 85GAU 04  |
|                  |       |     |        |           | 270                    | 40    |     | RTNA   | 77MEL 01  |
|                  |       |     |        |           | 320                    | 40    |     | ITNA   | 79REN 03  |
| <u>Cr (ug/g)</u> |       |     |        |           | <u>Cu (ug/g)</u>       |       |     |        |           |
| 1.9              | 0.3   | 11  | ICPES  | 81MUN 01  |                        |       |     |        |           |
| 2.0              |       |     | ICPES  | 81GOO 01  |                        |       |     |        |           |
| 3.06             | 0.3   |     | AA     | 80JAC 01  |                        |       |     |        |           |
| 3.33             | 0.74  |     | ICPES  | 84NAD 01  | <                      | 20    |     | ITNA   | 84GLA 11  |
| 3.5              | 0.3   | 6   | ICPES  | 82KUE 01  | 5.3                    | 1.3   |     | ITNA   | 85NDI 01  |
| 3.54             | 0.3   | 6   | ICPES  | 82KUE 01  | 9.1                    | 0.4   |     | AA     | 76GAL 01  |
| 3.6              | 0.5   | 11  | ICPES  | 82JON 01  | 9.5                    |       |     | ICPES  | 81GOO 01  |
| 3.7              | 1.2   | 11  | ICPES  | 81MUN 01  | 10.2                   | 1     |     | ICPES  | 82EVA 01  |
| 3.75             |       | 11  | AA     | 79HOE 02  | 10.5                   | 0.3   | 11  | ICPES  | 81MUN 01  |
| 3.9              |       |     | POL    | 83HOL 01  | 10.6                   | 0.9   |     | CPXRF  | 84BIS 01  |
| 4.0              | 0.34  |     | ITNA   | 85NDI 01  | 10.7                   | 0.5   |     | ICPES  | 83SCH 03  |
| 4.2              | 0.7   |     | ICPES  | 83SCH 03  | 10.8                   |       |     | ASV    | 83HOL 01  |
| 4.3              | 0.5   |     | ITNA   | 77NAD 02  | 10.9                   | 0.3   | 11  | ICPES  | 82JON 01  |
| 4.3              | 0.7   | 6   | ICPES  | 82KUE 01  | 10.9                   | 0.6   |     | RTNA   | 80SLO 01  |
| 4.4              |       | 11  | AA     | 79HOE 02  | 11.0                   | 0.2   | 7   | RTNA   | 80GAL 02  |
| 4.4              |       |     | FAA    | 82HOE 01  | 11.0                   | 0.2   |     | AA     | 83RAP 01  |
| 4.4              | 0.2   |     | ICPES  | 84ABD 01  | 11.1                   | 0.2   | 11  | ICPES  | 82JON 01  |
| 4.47             | 0.4   |     | FAA    | 83CAR 02  | 11.1                   | 0.5   | 11  | ICPES  | 82JON 01  |
| 4.5              | 0.2   |     | RTNA   | 76GAL 01  | 11.1                   | 0.5   | 11  | ICPES  | 81MUN 01  |
| 4.5              | 0.3   |     | ITNA   | 79KOB 03  | 11.2                   | 0.4   | 11  | ICPES  | 82JON 01  |
| 4.51             |       | 11  | AA     | 79HOE 02  | 11.4                   | 0.5   |     | RTNA   | 79KOB 01  |
| 4.6              | 0.2   | 11  | ICPES  | 82JON 01  | 11.5                   | 0.4   |     | FAE    | 76EPS 01  |
| 4.7              | 0.15  |     | AA     | 83RAP 01  | 11.5                   | 0.5   |     | SSMS   | 77PAU 01  |

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Cu (ug/g) cont.</u> |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| 11.6                   | 0.3   |     | ICPES  | 84WOL 02  | 178              | 2     |     | DCPES  | 81REE 01  |
| 11.6                   | 0.7   |     | ITNA   | 79KOB 03  | 384              | 79    | 11  | ICPES  | 81MUN 01  |
| 11.6                   | 0.7   |     | RTNA   | 78KOB 01  | 470              | 50    | 6   | ICPES  | 82KUE 01  |
| 11.8                   | 0.3   |     | RTNA   | 77DER 01  | 478              |       |     | ICPES  | 78CAP 01  |
| 11.8                   | 0.3   | 6   | ICPES  | 82KUE 01  | 491              | 20    | 11  | ICPES  | 82JON 01  |
| 11.8                   | 2.5   |     | VV     | 80SCH 05  | 494              |       |     | FAA    | 78CAP 01  |
| 12.0                   |       |     | RTNA   | 85TIA 01  | 500              | 26    | 6   | FAA    | 84FUD 02  |
| 12.0                   | 0.2   |     | IDMS   | 84BRO 03  | 506              | 34    |     | CPXRF  | 84BIS 01  |
| 12.0                   | 0.3   | 6   | ICPES  | 82KUE 01  | 508              | 14    |     | ICPES  | 83SCH 03  |
| 12.0                   | 0.5   |     | ICPES  | 80SCH 08  | 510              |       |     | ITNA   | 78CAP 01  |
| 12                     | 1     | 2   | FAA    | 84MIL 01  | 511              | 7     |     | ICPES  | 79HER 01  |
| 12                     | 1     | 2   | FAA    | 84MIL 01  | 516              | 36    |     | ICPES  | 84NAD 01  |
| 12.06                  | 0.03  |     | COLOR  | 77BUR 01  | 518              | 8     | 11  | ICPES  | 82JON 01  |
| 12.1                   |       |     | AA     | 80EVA 01  | 522              | 14    | 11  | COLOR  | 82SCH 03  |
| 12.1                   | 0.1   |     | COLOR  | 76EPS 01  | 525              | 11    | 6   | EXRF   | 79MAT 01  |
| 12.1                   | 0.2   |     | ICPES  | 79HER 01  | 527              | 30    |     | ICPES  | 84ABD 01  |
| 12.1                   | 0.4   |     | AA     | 82EVA 01  | 530              | 11    | 6   | ICPES  | 82KUE 01  |
| 12.14                  | 0.61  |     | RTNA   | 85DYB 01  | 540              | 10    | 6   | ICPES  | 82KUE 01  |
| 12.2                   | 0.1   | 6   | ICPES  | 82KUE 01  | 540              | 18    | D   | ICPES  | 80SCH 08  |
| 12.2                   | 0.3   |     | AA     | 85KOJ 01  | 540              | 18    |     | ICPES  | 80SCH 05  |
| 12.3                   |       |     | ICPES  | 78CAP 01  | 540              | 23    |     | ITNA   | 79KOB 03  |
| 12.3                   |       | 11  | AA     | 79HOE 02  | 541              | 15    | 11  | ICPES  | 82JON 01  |
| 12.6                   |       |     | FAA    | 78CAP 01  | 545              |       |     | AA     | 80EVA 01  |
| 12.6                   | 0.2   |     | ICPES  | 83SCH 04  | 548              | 9     |     | NM     | 80SUZ 01  |
| 12.6                   | 1.4   | 6   | EXRF   | 79MAT 01  | 551              |       | 11  | AA     | 79HOE 02  |
| 12.7                   | 0.4   |     | AA     | 76EPS 01  | 552              | 10    | 6   | FAA    | 84FUD 02  |
| 13                     | 0.4   |     | ICPES  | 84ABD 01  | 556              |       |     | ICPES  | 81GOO 01  |
| 13                     | 1     | D   | DCPES  | 81REE 01  | 556              | 11    | 11  | COLOR  | 82SCH 03  |
| 13                     | 1     |     | DCPES  | 79REE 01  | 556              | 15    | 2   | FAA    | 84MIL 01  |
| 13.2                   |       | 11  | AA     | 79HOE 02  | 557              | 8     |     | ITNA   | 79DAS 01  |
| 18                     | 3     |     | ICPES  | 84NAD 01  | 557              | 8     |     | RTNA   | 80SLO 01  |
| <u>Eu (ng/g)</u>       |       |     |        |           | <u>Gd (ng/g)</u> |       |     |        |           |
| <                      | 200   | L   | ITNA   | 78CAP 01  | 557              | 19    | 11  | ICPES  | 82JON 01  |
| 11                     | 1     |     | RTNA   | 83TJI 01  | 558              | 12    | 2   | FAA    | 84MIL 01  |
| 14                     | 1     |     | ITNA   | 79KOB 03  | 562              | 25    |     | AA     | 83RAP 01  |
| 20                     | 1     |     | ITNA   | 77NAD 02  | 566              | 18    |     | ITNA   | 77NAD 02  |
| <u>F (ug/g)</u>        |       |     |        |           | <u>Gd (ng/g)</u> |       |     |        |           |
| 4.3                    | 0.4   |     | ISE    | 83KNA 01  | 570              |       | 11  | AA     | 79HOE 02  |
| 4.4                    | 0.3   |     | ISE    | 84GLA 02  | 576              | 18    | 11  | ICPES  | 81MUN 01  |
|                        |       |     |        |           | 597              | 6     | 6   | EXRF   | 79MAT 01  |
|                        |       |     |        |           | 600              | 90    | 35  | ITNA   | 81GLA 03  |
|                        |       |     |        |           | 601              | 12    |     | ICPES  | 84WOL 02  |
|                        |       |     |        |           | 660              | 300   |     | ITNA   | 79REN 03  |
|                        |       |     |        |           | 763              | 34    |     | RTNA   | 77MEL 01  |
|                        |       |     |        |           | 1200             |       |     | EXRF   | 81PAR 01  |
|                        |       |     |        |           | <u>Gd (ng/g)</u> |       |     |        |           |
|                        |       |     |        |           | 60               | 21    |     | RTNA   | 83TJI 01  |

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc               | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|--------------------|-------|-----|--------|-----------|
| <u>Ge (ng/g)</u> |       |     |        |           | <u>K (%) cont.</u> |       |     |        |           |
| <                | 20    | L   | ICPES  | 82HAH 01  | 3.53               | 0.032 | 6   | ICPES  | 82KUE 01  |
|                  |       |     |        |           | 3.54               |       |     | ITNA   | 80EDD 01  |
| <u>H (%)</u>     |       |     |        |           | 3.56               |       | 1   | AA     | 78SZY 01  |
| 5.54             | 0.08  |     | CB     | 80SCH 02  | 3.57               | 0.04  | 6   | ICPES  | 82KUE 01  |
| 5.6              | 0.1   | 35  | TCGS   | 79GLA 04  | 3.57               | 0.29  | 2   | FAA    | 84MIL 01  |
| <u>H2O (%)</u>   |       |     |        |           | 3.58               | 0.06  |     | ICPES  | 84ABD 01  |
| 6                |       |     | VV     | 85TAN 01  | 3.59               |       |     | ICPES  | 79COO 01  |
| <u>Hf (ng/g)</u> |       |     |        |           | 3.6                | 0.06  |     | ICPES  | 85WHI 02  |
| 40               | 20    |     | RTNA   | 80SLO 01  | 3.6                | 0.09  |     | ITNA   | 79KOB 03  |
| <u>Hg (ng/g)</u> |       |     |        |           | 3.6                | 0.2   | 11  | ICPES  | 82JON 01  |
| 25               |       | 11  | CVAA   | 79HOE 02  | 3.61               |       | 1   | AA     | 78SZY 01  |
| 26               | 8     |     | RTNA   | 80SLO 01  | 3.61               | 0.35  |     | ITNA   | 82EHM 01  |
| 29               |       |     | CVAA   | 83MAR 05  | 3.65               | 0.21  |     | ICPES  | 84WOL 02  |
| 30               | 5     |     | CVAA   | 82GLA 02  | 3.7                | 0.04  | 11  | ICPES  | 82JON 01  |
| 33               | 16    |     | CVAA   | 82DOO 01  | 3.7                | 0.1   | 11  | ICPES  | 82JON 01  |
| 34               | 3     |     | ITNA   | 77NAD 02  | 3.73               |       |     | ITNA   | 78CAP 01  |
| 110              | 20    |     | RTNA   | 77MEL 01  | 3.74               | 0.07  |     | ITNA   | 80SLO 01  |
| <u>I (ug/g)</u>  |       |     |        |           | 3.9                | 0.1   | 11  | ICPES  | 82JON 01  |
| 1.08             | 0.04  |     | MS     | 85SCH 01  | 4.02               | 0.08  |     | CPXRF  | 84BIS 01  |
| 1.08             | 0.16  |     | IENA   | 82SAT 01  | 4.04               | 0.06  | 6   | EXRF   | 79MAT 01  |
| 1.1              | 0.2   |     | PAA    | 77WIL 01  | 4.85               | 0.05  | 6   | EXRF   | 79MAT 01  |
| 1.267            | 0.054 | 35  | RTNA   | 81ALL 01  | 7.95               |       |     | EXRF   | 81PAR 01  |
| 1.325            | 0.055 |     | RTNA   | 81STR 01  | <u>La (ng/g)</u>   |       |     |        |           |
| 1.325            | 0.055 | 34  | RTNA   | 81ALL 01  | 260                | 50    |     | RTNA   | 80SLO 01  |
| <u>In (ng/g)</u> |       |     |        |           | 315                |       |     | NM     | 83KAT 01  |
| 1.2              | 0.1   |     | RTNA   | 78KOB 01  | 320                | 30    |     | ITNA   | 77NAD 02  |
| 1.3              | 0.2   |     | RTNA   | 79KOB 01  | 350                | 10    |     | NM     | 85KAT 02  |
| <u>K (%)</u>     |       |     |        |           | 350                | 60    |     | ITNA   | 79REN 03  |
| 2.58             | 0.09  | 11  | ICPES  | 81MUN 01  | 361                | 89    |     | RTNA   | 83TJI 01  |
| 3.09             | 0.54  |     | ICPES  | 84NAD 01  | 400                | 50    |     | ITNA   | 85KAT 02  |
| 3.26             | 0.23  |     | ITNA   | 79REN 03  | <u>Li (ug/g)</u>   |       |     |        |           |
| 3.29             | 0.09  | 2   | FAA    | 84MIL 01  | 1.93               | 0.06  |     | ICPES  | 84NAD 01  |
| 3.29             | 0.18  |     | ICPES  | 79HER 01  | 2.04               | 0.01  |     | AA     | 85EVA 01  |
| 3.43             | 0.11  |     | ITNA   | 77NAD 02  | <u>Lu (ng/g)</u>   |       |     |        |           |
| 3.44             | 0.2   | 11  | ICPES  | 81MUN 01  | <                  | 5     | L   | RTNA   | 80SLO 01  |
| 3.46             |       |     | ITNA   | 84GLA 11  | 3                  | 1     |     | RTNA   | 83TJI 01  |
| 3.52             | 0.1   | 6   | ICPES  | 82KUE 01  |                    |       |     |        |           |

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Mg (ug/g)</u> |       |     |        |           | <u>Mn (ug/g) cont.</u> |       |     |        |           |
| 6990             |       |     | ICPES  | 81GOO 01  | 165                    | 3     | 6   | EXRF   | 79MAT 01  |
| 7000             |       |     | ICPES  | 78CAP 01  | 165                    | 8     | 2   | FAA    | 84MIL 01  |
| 7300             | 500   |     | ITNA   | 80SLO 01  | 165                    | 10    |     | ICPES  | 85WHI 02  |
| 7800             | 200   |     | ICPES  | 84ABD 01  | 166                    | 1     |     | ICPES  | 79HER 01  |
| 8300             | 800   |     | ICPES  | 84NAD 01  | 166                    | 5     | 11  | ICPES  | 82JON 01  |
| 8340             | 130   |     | ICPES  | 84WOL 02  | 167                    | 5     |     | ICPES  | 83SCH 03  |
| 8400             |       |     | FAA    | 78CAP 01  | 167                    | 6     | 11  | ICPES  | 82JON 01  |
| 8500             | 120   | 11  | ICPES  | 81MUN 01  | 167                    | 7     |     | ICPES  | 82EVA 01  |
| 8550             | 65    | 6   | ICPES  | 82KUE 01  | 168                    | 3     | D   | ICPES  | 80SCH 08  |
| 8600             | 230   | 6   | ICPES  | 82KUE 01  | 168                    | 3     |     | VV     | 80SCH 05  |
| 8600             | 400   | 11  | ICPES  | 82JON 01  | 168                    | 4     |     | AA     | 83RAP 01  |
| 8600             | 500   |     | ICPES  | 85WHI 02  | 168                    | 6     |     | ICPES  | 83SCH 04  |
| 8700             | 100   |     | ICPES  | 79HER 01  | 169                    | 4     |     | ITNA   | 80SLO 01  |
| 8700             | 500   | 2   | FAA    | 84MIL 01  | 170                    |       |     | AA     | 80EVA 01  |
| 8790             | 150   | 6   | ICPES  | 82KUE 01  | 170                    | 4     |     | AA     | 82EVA 01  |
| 8800             | 100   | 11  | ICPES  | 82JON 01  | 171                    |       |     | ITNA   | 78CAP 01  |
| 8800             | 270   |     | ICPES  | 83SCH 03  | 171                    | 1     | 6   | ICPES  | 82KUE 01  |
| 8833             | 299   | 11  | ICPES  | 81MUN 01  | 172                    | 5     | 6   | ICPES  | 82KUE 01  |
| 8900             | 300   | 11  | ICPES  | 82JON 01  | 173                    | 3     |     | ICPES  | 84NAD 01  |
| 9000             | 200   | 11  | ICPES  | 82JON 01  | 176                    | 2     | 11  | ICPES  | 81MUN 01  |
| 9000             | 600   |     | ITNA   | 78CAP 01  | 178                    | 2     |     | DCPES  | 79REE 01  |
| 9200             | 300   | 2   | FAA    | 84MIL 01  | 184                    | 10    | 6   | EXRF   | 79MAT 01  |
| 9800             |       |     | ITNA   | 77NAD 02  | 185                    |       |     | ICPES  | 81GOO 01  |
|                  |       |     |        |           | 187.9                  | 18.9  |     | PAA    | 80YAM 01  |
|                  |       |     |        |           | 200                    |       |     | ITNA   | 79REN 03  |
|                  |       |     |        |           | 684                    |       |     | EXRF   | 81PAR 01  |
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Mo (ng/g)</u>       |       |     |        |           |
| 1.3              | 0.1   |     | DCPES  | 81REE 01  | 200                    | 100   | 11  | ICPES  | 82JON 01  |
| 49               | 2     | 11  | ICPES  | 82JON 01  | 200                    | 100   | 11  | ICPES  | 82JON 01  |
| 102              | 3     |     | AA     | 76GAL 01  | 300                    | 41    |     | COLOR  | 85EVA 02  |
| 118              | 3     |     | ITNA   | 76GAL 01  | 300                    | 100   | 11  | ICPES  | 82JON 01  |
| 146              | 32    |     | AE+AF  | 82GOL 01  | 300                    | 100   |     | RTNA   | 80SLO 01  |
| 155              |       |     | FAA    | 78CAP 01  | 400                    | 200   | 11  | ICPES  | 82JON 01  |
| 156              |       | 11  | AA     | 79HOE 02  | 420                    |       |     | RTNA   | 85TIA 01  |
| 156              | 4     |     | ICPES  | 84ABD 01  |                        |       |     |        |           |
| 156              | 5     |     | ITNA   | 79KOB 03  |                        |       |     |        |           |
| 157              |       |     | ICPES  | 78CAP 01  |                        |       |     |        |           |
| 157              | 5     | 6   | FAA    | 84FUD 02  |                        |       |     |        |           |
| 157              | 13    | 11  | ICPES  | 81MUN 01  |                        |       |     |        |           |
| 158              | 7     | 11  | ICPES  | 82JON 01  |                        |       |     |        |           |
| 158              | 13    | 2   | FAA    | 84MIL 01  |                        |       |     |        |           |
| 159              |       | 11  | AA     | 79HOE 02  | 5.31                   |       |     | VV     | 85TAN 01  |
| 160              |       | 35  | ITNA   | 81GLA 04  | 5.62                   | 0.11  |     | CB     | 80SCH 02  |
| 160              | 3     | 11  | ICPES  | 82JON 01  | 6                      | 0.4   | 35  | TCGS   | 79GLA 04  |
| 160              | 3     |     | ICPES  | 84WOL 02  |                        |       |     |        |           |
| 161              | 6     |     | ITNA   | 77NAD 02  |                        |       |     |        |           |
| 162              | 4     | 6   | FAA    | 84FUD 02  |                        |       |     |        |           |
| 162              | 7     |     | CPXRF  | 84BIS 01  |                        |       |     |        |           |
| 162              | 9     |     | ITNA   | 84GLA 02  |                        |       |     |        |           |
| 164              |       |     | ITNA   | 84GLA 11  |                        |       |     |        |           |
| 165              | 3     | 6   | ICPES  | 82KUE 01  |                        |       |     |        |           |

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc            | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|-----------------|-------|-----|--------|-----------|
| <u>Na (%)</u>    |       |     |        |           | <u>P (ug/g)</u> |       |     |        |           |
| 1.13             | 0.02  |     | ITNA   | 80SLO 01  | 4100            | 200   |     | ICPES  | 84NAD 01  |
| 1.24             | 0.21  |     | ICPES  | 84NAD 01  | 4500            |       |     | ICPES  | 78CAP 01  |
| 1.28             | 0.1   |     | ITNA   | 82SCH 05  | 4530            | 120   | 11  | COLOR  | 84LIN 01  |
| 1.29             | 0.11  | 11  | ICPES  | 81MUN 01  | 4600            | 100   |     | ICPES  | 84ABD 01  |
| 1.31             | 0.07  |     | ITNA   | 77NAD 02  | 4814            | 300   |     | ICPES  | 84PRI 01  |
| 1.33             | 0.03  | 11  | ICPES  | 81MUN 01  | 4865            |       |     | ICPES  | 81GOO 01  |
| 1.33             | 0.05  |     | ITNA   | 79KOB 03  | 5082            | 192   | 11  | ICPES  | 81MUN 01  |
| 1.41             |       |     | ICPES  | 81GOO 01  | 5100            |       |     | FAA    | 79EDI 01  |
| 1.42             | 0.02  |     | ICPES  | 84WOL 02  | 5100            | 120   |     | ICPES  | 84WOL 02  |
| 1.43             |       |     | ITNA   | 84GLA 02  | 5100            | 200   |     | CPAA   | 83MAS 02  |
| 1.43             | 0.03  |     | ICPES  | 84ABD 01  | 5120            | 60    | 11  | ICPES  | 81MUN 01  |
| 1.44             |       |     | ITNA   | 78CAP 01  | 5200            | 200   | 11  | ICPES  | 82JON 01  |
| 1.48             |       | 35  | ITNA   | 81GLA 04  | 5240            | 70    | 6   | ICPES  | 82KUE 01  |
| 1.5              |       |     | ITNA   | 84GLA 11  | 5300            | 70    | 6   | ICPES  | 82KUE 01  |
| 1.54             | 0.14  |     | ITNA   | 79REN 03  | 5300            | 100   | 11  | ICPES  | 82JON 01  |
| 1.547            | 0.021 |     | ICPES  | 85WHI 02  | 5300            | 300   |     | ICPES  | 85WHI 02  |
| 1.55             |       | 1   | AA     | 78SZY 01  | 5350            | 45    | 6   | ICPES  | 82KUE 01  |
| 1.56             |       | 1   | AA     | 78SZY 01  | 5360            | 270   |     | ICPES  | 81OWE 01  |
|                  |       |     |        |           | 5400            |       |     | ICPES  | 79EDI 01  |
|                  |       |     |        |           | 5500            | 200   | 11  | ICPES  | 82JON 01  |
| <u>Nd (ng/g)</u> |       |     |        |           | 5500            | 300   | 14  | FAA    | 84LIN 01  |
| 306              | 73    |     | RTNA   | 83TJI 01  | 5500            | 500   | 14  | AA     | 84LIN 01  |
|                  |       |     |        |           | 5600            | 100   | 11  | COLOR  | 84LIN 01  |
| <u>Ni (ug/g)</u> |       |     |        |           | 5600            | 300   | 14  | FAA    | 84LIN 01  |
| 1.3              | 0.1   |     | DCPES  | 79REE 01  | 5600            | 400   | 7   | NM     | 81SHI 01  |
| 2.3              | 0.5   |     | RTNA   | 80SLO 01  | 5700            | 200   | 11  | ICPES  | 82JON 01  |
| 4.1              | 0.5   |     | ITNA   | 77NAD 02  | 6000            | 100   |     | ICPES  | 79HER 01  |
| 4.8              | 0.7   |     | ICPES  | 82EVA 01  |                 |       |     |        |           |
| 4.9              | 0.2   | 11  | ICPES  | 82JON 01  |                 |       |     |        |           |
| 5                | 7     |     | ICPES  | 84WOL 02  |                 |       |     |        |           |
| 5.1              | 0.1   | 11  | ICPES  | 82JON 01  |                 |       |     |        |           |
| 5.1              | 0.4   | 11  | ICPES  | 81MUN 01  | 0.8             | 0.1   | 11  | ICPES  | 82JON 01  |
| 5.12             |       |     | VOLT   | 81PIH 01  | 0.8             | 0.3   | 11  | ICPES  | 82JON 01  |
| 5.2              | 0.3   |     | CPXRF  | 84BIS 01  | 1.0             | 0.1   |     | FAA    | 80LEG 01  |
| 5.4              | 0.1   | 11  | ICPES  | 82JON 01  | 1.0             | 0.8   |     | ICPES  | 79HER 01  |
| 5.4              | 0.1   | 11  | ICPES  | 82JON 01  | 1.02            |       |     | FAA    | 82HOE 01  |
| 5.4              | 1     | 6   | EXRF   | 79MAT 01  | 1.03            | 0.15  |     | ASV    | 82GAJ 01  |
| 5.5              | 0.5   |     | ICPES  | 83SCH 03  | 1.04            | 0.09  |     | ASV    | 80SZY 01  |
| 5.51             | 0.32  | 6   | ICPES  | 82KJE 01  | 1.09            | 0.06  |     | FAA    | 79DAB 02  |
| 5.6              | 0.3   |     | AA     | 83RAP 01  | 1.1             |       | 11  | FAA    | 79HOE 02  |
| 5.7              | 0.3   | 11  | ICPES  | 81MUN 01  | 1.1             | 0.06  |     | AA     | 82EVA 01  |
| 5.8              | 0.2   |     | AA     | 82EVA 01  | 1.1             | 0.08  |     | ASV    | 82SAT 02  |
| 6.03             | 0.52  | 6   | ICPES  | 82KUE 01  | 1.1             | 0.1   |     | AA     | 80SCH 05  |
| 6.1              | 0.2   |     | PAA    | 80YAM 01  | 1.1             | 0.1   | D   | FAA    | 80SCH 08  |
| 6.17             | 0.72  | 6   | ICPES  | 82KUE 01  | 1.1             | 0.2   |     | FAA    | 81KNA 01  |
| 6.4              |       |     | POL    | 83HOL 01  | 1.12            | 0.03  |     | SSMS   | 77PAU 01  |
| 6.5              | 0.2   |     | RTNA   | 78KOB 01  | 1.16            | 0.08  |     | FAA    | 82RAI 01  |
| 6.5              | 0.3   |     | RTNA   | 79KOB 01  | 1.18            | 0.12  |     | AA     | 84STO 01  |
| 6.7              | 0.8   |     | ICPES  | 84ABD 01  | 1.2             |       |     | FAA    | 80PRE 01  |
| 7.5              | 0.5   |     | RTNA   | 77MEL 01  | 1.25            |       |     | ASV    | 78CAP 01  |
| 8.1              |       |     | FAA    | 82HOE 01  | 1.25            | 0.2   |     | AA     | 83RAP 01  |
| 8.1              | 0.2   |     | ICPES  | 79HER 01  |                 |       |     |        |           |

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Pb (ug/g) cont.</u> |       |     |        |           | <u>Sb (ng/g)</u> |       |     |        |           |
| 1.3                    |       |     | FAA    | 82PRE 01  | 14               | 3     | H   | ICPES  | 82HAH 01  |
| 1.3                    |       | 6   | FAA    | 81HIN 01  | 27               | 6     |     | ITNA   | 77NAD 02  |
| 1.3                    |       | 6   | FAA    | 82KOI 01  | 31               | 1     |     | RTNA   | 80KOS 02  |
| 1.3                    | 0.4   |     | HAA    | 82WEI 01  | 38               | 3     |     | RTNA   | 79HOE 01  |
| 1.4                    |       | 6   | FAA    | 82KOI 01  | 40               | 10    | 7   | RTNA   | 80GAL 02  |
| 1.4                    |       | 6   | FAA    | 81HIN 01  | 44               | 2     |     | ITNA   | 79KOB 03  |
| 1.75                   | 1.33  |     | ICPES  | 82EVA 01  | 50               |       |     | ITNA   | 78CAP 01  |
| 2.0                    | 1.4   |     | PAA    | 80YAM 01  | 50               | 20    |     | RTNA   | 80SLO 01  |
| 2.2                    | 0.6   |     | ICPES  | 83SCH 03  | 690              | 150   |     | ITNA   | 79REN 03  |
| 2.5                    | 0.4   |     | ICPES  | 84ABD 01  | <u>Sc (ng/g)</u> |       |     |        |           |
| 3.1                    | 1.6   | 11  | ICPES  | 81MUN 01  | 150              | 30    | 5   | ITNA   | 80TOU 01  |
| 3.4                    | 0.6   |     | AA     | 84KAN 01  | 153              | 6     |     | ITNA   | 86GAU 01  |
| 4.4                    | 3.1   | 11  | ICPES  | 81MUN 01  | 159              | 12    |     | ITNA   | 84GLA 11  |
| <u>Pd (ng/g)</u>       |       |     |        |           | 160              |       |     | ITNA   | 78CAP 01  |
| <                      | 2     | L   | RTNA   | 81BYR 01  | 170              |       |     | ITNA   | 80EDD 01  |
| <u>Pr (ng/g)</u>       |       |     |        |           | 170              | 4     |     | ITNA   | 77NAD 02  |
| <                      | 60    | L   | RTNA   | 80SLO 01  | 170              | 20    |     | RTNA   | 80SLO 01  |
| <u>Rb (ug/g)</u>       |       |     |        |           | 180              | 10    |     | ITNA   | 79KOB 03  |
| 10                     |       |     | ITNA   | 78CAP 01  | 180              | 20    |     | RTNA   | 77MEL 01  |
| 11                     | 1     | 35  | ITNA   | 81GLA 03  | 470              | 40    |     | ITNA   | 79REN 03  |
| 11.32                  | 3.1   |     | ITNA   | 79REN 03  | <u>Se (ng/g)</u> |       |     |        |           |
| 11.6                   | 0.3   |     | ITNA   | 77NAD 02  | 24               | 10    | 9   | ITNA   | 80WAN 01  |
| 12.2                   | 0.7   |     | FAA    | 83GRO 02  | 25               |       |     | FAA    | 78CAP 01  |
| 12.7                   | 0.47  |     | AA     | 85EVA 01  | 33               | 3     | 11  | GC     | 81UCH 02  |
| 17                     | 3     |     | RTNA   | 77MEL 01  | 33               | 3     | 11  | GC     | 81UCH 02  |
| 39                     |       |     | EXRF   | 81PAR 01  | 37               |       |     | FLUOR  | 79WAT 02  |
| <u>S (ug/g)</u>        |       |     |        |           | 40               | 10    |     | RTNA   | 80KNA 01  |
| 2400                   | 600   |     | CPXRF  | 79REN 02  | 42.9             |       |     | HAA    | 77IHN 01  |
| 3600                   | 500   |     | CB     | 84GLA 11  | 60               | 20    |     | RTNA   | 80SLO 01  |
| 3834                   | 58    |     | ICPES  | 84PRI 01  | 66               | 9     |     | ITNA   | 77NAD 02  |
| 4400                   | 400   |     | CB     | 86BOW 01  | 360              | 20    |     | FAA    | 82JUL 01  |
| 4440                   |       | D   | CB     | 85JAC 01  | 400              | 110   |     | HAA    | 82JUL 01  |
| 4440                   | 60    | 6   | CB     | 84JAC 01  | 510              | 80    |     | RTNA   | 82POL 01  |
| 4500                   | 270   |     | WXRF   | 86BOW 01  | <u>Si (ug/g)</u> |       |     |        |           |
| 4800                   | 200   |     | ICPES  | 85WHI 02  | 2900             | 900   |     | ICPES  | 84NAD 01  |
| 4860                   |       | D   | CB     | 85JAC 01  | <u>Sm (ng/g)</u> |       |     |        |           |
| 4860                   | 160   | 6   | CB     | 84JAC 01  | 33               | 4     | 5   | ITNA   | 80TOU 01  |
|                        |       |     |        |           | 54               | 21    |     | RTNA   | 83TJI 01  |
|                        |       |     |        |           | 80               | 20    |     | RTNA   | 80SLO 01  |
|                        |       |     |        |           | 200              | 140   |     | ITNA   | 79REN 03  |

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer  | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|--------|-----|--------|-----------|
| <u>Sn (ug/g)</u> |       |     |        |           | <u>V (ug/g)</u>  |        |     |        |           |
| <                | 0.02  | L   | ICPES  | 82HAH 01  | 0.928            | 0.0013 | 11  | RTNA   | 82HEY 02  |
| 3.1              |       |     | ICPES  | 78CAP 01  | 1.06             | 0.17   |     | ITNA   | 77NAD 02  |
|                  |       |     |        |           | 1.08             | 0.07   | D   | DCPES  | 81REE 01  |
| <u>Sr (ug/g)</u> |       |     |        |           | <u>W (ng/g)</u>  |        |     |        |           |
|                  |       |     |        |           | 1.08             | 0.07   |     | DCPES  | 79REE 01  |
|                  |       |     |        |           | 1.093            | 0.085  |     | ITNA   | 82HEY 02  |
| 72.5             | 3.4   |     | CPXRF  | 84BIS 01  | 1.13             | 0.01   |     | RTNA   | 78BYR 01  |
| 75               | 1     |     | ICPES  | 84NAD 01  | 1.13             | 0.018  | 11  | RTNA   | 82HEY 02  |
| 79               | 1     |     | ICPES  | 79HER 01  | 1.2              | 0.06   |     | ITNA   | 76GAL 01  |
| 82.5             | 15.8  |     | AE+AF  | 82GOL 01  | 1.207            | 0.0031 | 11  | RTNA   | 82HEY 02  |
| 83.4             | 0.2   |     | IENA   | 85GAU 04  | 1.28             | 0.07   | 11  | ICPES  | 82JON 01  |
| 83.7             | 0.7   |     | AA     | 85GAU 04  | 1.34             | 0.06   | 11  | ICPES  | 82JON 01  |
| 87               | 8     |     | AA     | 85EVA 01  | 1.44             |        |     | COLOR  | 85EVA 02  |
| 208              |       |     | EXRF   | 81PAR 01  | 1.5              | 0.2    |     | ICPES  | 83SCH 03  |
|                  |       |     |        |           | 1.7              |        |     | ITNA   | 78CAP 01  |
| <u>Ta (ug/g)</u> |       |     |        |           | <u>Yb (ng/g)</u> |        |     |        |           |
| 0.23             | 0.08  |     | ITNA   | 79REN 03  | 140              | 50     |     | RTNA   | 80SLO 01  |
| <u>Tb (ng/g)</u> |       |     |        |           | <u>Zn (ug/g)</u> |        |     |        |           |
| 8                | 1     |     | RTNA   | 83TJI 01  | 42               | 2      |     | RTNA   | 80SLO 01  |
| <u>Th (ng/g)</u> |       |     |        |           | 43.1             | 4      |     | ICPES  | 82EVA 01  |
| 110              | 10    |     | ITNA   | 77NAD 02  | 45.9             | 2.8    |     | RTNA   | 77DER 01  |
| 150              | 40    |     | RTNA   | 80SLO 01  | 46               | 1      | 11  | ICPES  | 82JON 01  |
| <u>Ti (ug/g)</u> |       |     |        |           | 46               | 2      | 11  | ICPES  | 82JON 01  |
| 8.9              | 1.4   |     | ICPES  | 83SCH 03  | 46.2             | 0.6    | 11  | ICPES  | 82JON 01  |
| 16.5             |       |     | ICPES  | 78CAP 01  | 46.7             |        | 11  | AA     | 79HOE 02  |
| 28               | 2     |     | ICPES  | 84NAD 01  | 47               | 0.48   |     | ITNA   | 79REN 03  |
| <u>Tl (ng/g)</u> |       |     |        |           | 47               | 1.2    |     | ICPES  | 84WOL 02  |
| 31               | 5     |     | SSMS   | 77PAU 01  | 47               | 2      | 2   | FAA    | 84MIL 01  |
| <u>U (ng/g)</u>  |       |     |        |           | 47               | 2.5    |     | ICPES  | 83SCH 03  |
| 42               |       |     | DNA    | 84GLA 02  | 47               | 4      |     | ICPES  | 84ABD 01  |
| 45               | 0.8   | 35  | DNA    | 80GLA 04  | 48               |        |     | ICPES  | 78CAP 01  |
| 47               | 5     |     | DNA    | 86GAU 01  | 48               | 1      | 11  | ICPES  | 82JON 01  |
| 48               | 2     |     | DNA    | 85GAU 04  | 48               | 2      | 11  | ICPES  | 82JON 01  |
| 69               | 120   | R   | DNA    | 81GLA 03  | 48               | 3      | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 48               | 3      | D   | ICPES  | 80SCH 08  |
|                  |       |     |        |           | 48               | 3      |     | ICPES  | 80SCH 05  |
|                  |       |     |        |           | 48.9             | 4.6    | 11  | ICPES  | 81MUN 01  |
|                  |       |     |        |           | 49.2             | 0.1    |     | PAA    | 80YAM 01  |
|                  |       |     |        |           | 49.5             | 0.7    |     | SSMS   | 77PAU 01  |
|                  |       |     |        |           | 49.8             | 1.3    | 6   | ICPES  | 82KUE 01  |

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

| Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g) cont.</u> |       |     |        |           |
| 50                     |       |     | ICPES  | 81G00 01  |
| 50                     | 1     |     | ITNA   | 77NAD 02  |
| 50                     | 3     |     | ICPES  | 85WHI 02  |
| 50.6                   | 1.3   | 6   | ICPES  | 82KUE 01  |
| 50.8                   |       |     | AA     | 80EVA 01  |
| 50.8                   | 1.9   |     | AA     | 82EVA 01  |
| 51                     | 2     |     | ICPES  | 84NAD 01  |
| 51.2                   | 0.6   | 6   | ICPES  | 82KUE 01  |
| 52                     | 1     |     | DCPES  | 79REE 01  |
| 52                     | 1     | D   | DCPES  | 81REE 01  |
| 52                     | 2.2   |     | ITNA   | 79KOB 03  |
| 52                     | 3     |     | AA     | 83RAP 01  |
| 52.6                   | 2.5   | 11  | ICPES  | 81MUN 01  |
| 52.9                   | 2.2   | 6   | EXRF   | 79MAT 01  |
| 53                     |       | 11  | AA     | 79HOE 02  |
| 53                     | 3     | 11  | ICPES  | 82JON 01  |
| 54                     | 1     |     | ICPES  | 79HER 01  |
| 54                     | 3     |     | ICPES  | 83SCH 04  |
| 55                     | 2     | 2   | FAA    | 84MIL 01  |
| 57                     | 8     |     | RTNA   | 77MEL 01  |
| 59.7                   |       |     | FAA    | 78CAP 01  |
| 60.1                   | 2     | 6   | EXRF   | 79MAT 01  |
| 66.8                   | 8     |     | CPXRF  | 84BIS 01  |
| 72.5                   | 1.6   |     | RTNA   | 76GAL 01  |
| 72.8                   | 1.3   |     | AA     | 76GAL 01  |
| 119                    |       |     | EXRF   | 81PAR 01  |

TABLE 1571-1: COMPILED DATA FOR NBS SRM 1571 ORCHARD LEAVES (revised 3/1/86)

| ELE     | UNITS | NBS         |     | CONSENSUS   |       | MEDIAN | RANGE       | AA          |      | NAA         |      | ICPES       |      | XRF         |      | OTHER METHODS |       |        |       |        |
|---------|-------|-------------|-----|-------------|-------|--------|-------------|-------------|------|-------------|------|-------------|------|-------------|------|---------------|-------|--------|-------|--------|
|         |       | Mean        | SD  | Mean        | SD    |        |             | Mean        | SD   | Mean        | SD   | Mean        | SD   | Mean        | SD   | Mean          | SD    | Method | n     | Method |
| Ag      | ng/g  | ---         | --- | 320         | (2)   | ---    | 13 - 620    | ---         | ---  | 316.5       | (2)  | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| Al      | ug/g  | ---         | --- | 323 ± 112   | (51)  | 347    | 123 - 520   | 455         | (2)  | 400 ± 60    | (19) | 241 ± 98    | (11) | 488         | (1)  | 210 ± 50      | (9)   | OES    | CPAA  | (1)    |
| Al      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 405           | (1)   | SSMS   | 14NAA | (2)    |
| As      | ug/g  | 10 ± 2      | --- | 10.7 ± 1.3  | (179) | 10.3   | 8 - 14.3    | 11 ± 2      | (11) | 10.8 ± 1.5  | (77) | 10.8 ± 1.5  | (14) | 13.0 ± 2.5  | (14) | 10.1 ± 1.2    | (5)   | PAA    | PAA   | (7)    |
| As      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | 10   | (1)           | MPOES | ---    | ---   | ---    |
| As      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | 9.8  | (1)           | ESCA  | 14NAA  | (2)   | GCMS   |
| As      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | 11   | (1)           | ICPHS | ---    | ---   | ---    |
| As      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | 12   | (1)           | AE±AF | ---    | ---   | ---    |
| As(III) | ug/g  | ---         | --- | 4.9         | (1)   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| Au      | ng/g  | ---         | --- | 1.4 ± 0.4   | (18)  | 1.4    | 0.72 - 2    | ---         | ---  | 1.4 ± 0.4   | (18) | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| B       | ug/g  | 33 ± 3      | --- | 33 ± 3      | (36)  | 33     | 25.15 - 40  | 33.5        | (2)  | ---         | ---  | 33 ± 4      | (11) | ---         | ---  | 32 ± 5        | (11)  | OES    | COLOR | (3)    |
| B       | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 32.6 ± 0.7    | (5)   | TCGS   | CPAA  | (4)    |
| Ba      | ug/g  | 44          | --- | 43 ± 4      | (46)  | 43     | 35 - 52     | 47.15       | (2)  | 41 ± 6      | (22) | 43 ± 5      | (10) | 36.95       | (2)  | 44 ± 6        | (6)   | SSMS   | OES   | (5)    |
| Be      | ng/g  | 27 ± 10     | --- | 24 ± 8      | (7)   | 26     | 13.7 - 36   | 31          | (2)  | ---         | ---  | 16 ± 3      | (3)  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| Bi      | ng/g  | 100         | --- | 90 ± 40     | (9)   | 100    | 30 - 160    | 44 ± 18     | (3)  | ---         | ---  | ---         | ---  | ---         | ---  | 160           | (1)   | AF     | FLUOR | (1)    |
| Br      | ug/g  | 10          | --- | 9.5 ± 1.1   | (53)  | 9.4    | 7.1 - 12    | ---         | ---  | 9.7 ± 1.2   | (43) | ---         | ---  | 8.4 ± 1.3   | (13) | ---           | ---   | ---    | ---   | ---    |
| C       | %     | ---         | --- | 46.1 ± 0.5  | (6)   | 45.8   | 45.6 - 47   | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 45.6          | (1)   | COUL   | CB    | (3)    |
| Ca      | %     | 2.09 ± 0.03 | --- | 2.04 ± 0.12 | (92)  | 2.04   | 1.74 - 2.29 | 1.99 ± 0.16 | (10) | 2.07 ± 0.16 | (22) | 2.05 ± 0.08 | (21) | 1.99 ± 0.15 | (15) | 2.05 ± 0.11   | (4)   | PAA    | OES   | (12)   |
| Ca      | %     | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 1.98 ± 0.12   | (3)   | 14NAA  | FE    | (1)    |
| Ca      | %     | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 2.13          | (1)   | SSMS   | COLOR | (3)    |
| Cd      | ng/g  | 110 ± 10    | --- | 119 ± 22    | (86)  | 120    | 70 - 190    | 123 ± 35    | (47) | 130 ± 40    | (17) | 152 ± 42    | (12) | ---         | ---  | 110           | (1)   | PAA    | ASV   | (5)    |
| Cd      | ng/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 100           | (1)   | SSMS   | TCGS  | (2)    |
| Cd      | ng/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 116 ± 31      | (5)   | AF     | ---   | ---    |
| Ce      | ug/g  | ---         | --- | 0.99 ± 0.12 | (17)  | 0.98   | 0.82 - 1.25 | ---         | ---  | 1.01 ± 0.13 | (15) | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| Cl      | ug/g  | 690         | --- | 730 ± 40    | (35)  | 730    | 630 - 810   | 605         | (2)  | 720 ± 60    | (23) | ---         | ---  | 767 ± 34    | (5)  | 707 ± 19      | (3)   | PAA    | ISE   | (1)    |
| Co      | ng/g  | 200         | --- | 160 ± 37    | (49)  | 150    | 100 - 260   | 160 ± 34    | (5)  | 161 ± 37    | (43) | 190         | (1)  | ---         | ---  | 107           | (1)   | VOLT   | ASV   | (1)    |
| Cr      | ug/g  | 2.6 ± 0.3   | --- | 2.6 ± 0.3   | (94)  | 2.6    | 1.9 - 3.3   | 2.5 ± 0.4   | (18) | 2.6 ± 0.3   | (47) | 2.3 ± 0.4   | (12) | 2.5 ± 0.3   | (5)  | 2.22          | (1)   | PAA    | DCPES | (1)    |
| Cr      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 2.8 ± 0.4     | (8)   | SSMS   | CHEML | (1)    |
| Cr      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| Cs      | ng/g  | 40          | --- | 38 ± 9      | (20)  | 40     | 20 - 50     | ---         | ---  | 40 ± 13     | (19) | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| Cu      | ug/g  | 12 ± 1      | --- | 12.0 ± 1.4  | (164) | 12     | 8.9 - 16    | 11.8 ± 1.1  | (41) | 12.2 ± 1.8  | (39) | 12.3 ± 1.8  | (28) | 12.4 ± 2.4  | (22) | 12.1          | (1)   | PAA    | OES   | (12)   |
| Cu      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 11.4 ± 1.1    | (7)   | SSMS   | ICPMS | (4)    |
| Cu      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 12.4 ± 0.4    | (6)   | ASV    | POL   | (3)    |
| Cu      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| Dy      | ng/g  | ---         | --- | 82 ± 23     | (4)   | 80     | 53 - 110    | ---         | ---  | 73 ± 18     | (3)  | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| Er      | ng/g  | ---         | --- | 29.7 ± 1.5  | (3)   | 30     | 28 - 31     | ---         | ---  | 29.5        | (2)  | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| Eu      | ng/g  | ---         | --- | 24 ± 3      | (20)  | 24     | 20 - 31     | ---         | ---  | 24 ± 3      | (20) | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| F       | ug/g  | 4           | --- | 3.9 ± 0.5   | (10)  | 3.8    | 3.12 - 4.8  | 3.6         | (1)  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| F       | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |
| Fe      | ug/g  | 300 ± 20    | --- | 286 ± 28    | (147) | 290    | 213 - 348   | 270 ± 40    | (23) | 289 ± 23    | (43) | 278 ± 32    | (27) | 297 ± 36    | (22) | 318 ± 24      | (3)   | PAA    | OES   | (13)   |
| Fe      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 290 ± 8       | (3)   | ASV    | 14NAA | (3)    |
| Fe      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | 279 ± 17      | (5)   | COLOR  | SSMS  | (8)    |
| Fe      | ug/g  | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | ---   | ---    | ---   | ---    |

TABLE 1571-1: COMPILED DATA FOR NBS SRM 1571 ORCHARD LEAVES (cont.)

| ELE   | UNITS  | NBS         |     | CONSENSUS   |       | MEDIAN | RANGE       | AA          |      | NAA         |      | ICPES       |      | XRF         |      | OTHER METHODS |     |            |      |        |      |     |      |
|-------|--------|-------------|-----|-------------|-------|--------|-------------|-------------|------|-------------|------|-------------|------|-------------|------|---------------|-----|------------|------|--------|------|-----|------|
|       |        | Mean        | SD  | Mean        | SD    |        |             | Mean        | SD   | Mean        | SD   | Mean        | SD   | Mean        | SD   | Mean          | SD  | Method     | n    | Method | n    |     |      |
| Ga    | ng/g   | 80          | --- | 88 ± 9      | (4)   | 86     | 78 - 100    | ---         | ---  | 88 ± 9      | (4)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Gd    | ng/g   | ---         | --- | 68 ± 48     | (6)   | 81     | 1.64 - 111  | ---         | ---  | 61 ± 51     | (5)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Ge    | ng/g   | ---         | --- | 150         | (1)   | ---    | ---         | ---         | ---  | ---         | (1)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| H     | %      | ---         | --- | 5.84 ± 0.26 | (5)   | 5.91   | 5.54 - 6.1  | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| H2O-  | %      | ---         | --- | 11.4        | (1)   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Hf    | ng/g   | ---         | --- | 30 ± 5      | (6)   | 28     | 23 - 37     | ---         | ---  | 30 ± 5.0    | (6)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Hg    | ng/g   | 155 ± 15    | --- | 155 ± 14    | (87)  | 155    | 122 - 190   | 154 ± 16    | (38) | 160 ± 19    | (46) | 140         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Hg    | ng/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Ho    | ng/g   | ---         | --- | 16 ± 5      | (4)   | 13     | 11 - 22     | ---         | ---  | 15 ± 6      | (3)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| I     | ng/g   | 170         | --- | 186 ± 18    | (9)   | 188    | 160 - 220   | ---         | ---  | 186 ± 18    | (9)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| I-129 | fCi/g  | ---         | --- | 0.0060      | (1)   | ---    | ---         | ---         | ---  | 0.0060      | (1)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| In    | ng/g   | ---         | --- | 1.6 ± 0.3   | (4)   | 1.6    | 1.23 - 2    | ---         | ---  | 1.6 ± 0.3   | (4)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Ir    | ng/g   | ---         | --- | 15          | (1)   | ---    | ---         | ---         | ---  | 15          | (1)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| K     | %      | 1.47 ± 0.03 | --- | 1.44 ± 0.07 | (83)  | 1.45   | 1.26 - 1.62 | 1.41 ± 0.04 | (9)  | 1.45 ± 0.06 | (32) | 1.45 ± 0.13 | (16) | 1.48 ± 0.10 | (12) | ---           | --- | ---        | ---  |        |      |     |      |
| K     | %      | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| La    | ug/g   | ---         | --- | 1.17 ± 0.11 | (30)  | 1.2    | 0.95 - 1.4  | ---         | ---  | 1.16 ± 0.13 | (27) | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Li    | ng/g   | 600         | --- | 700 ± 150   | (5)   | 770    | 500 - 830   | 630 ± 170   | (3)  | 770         | (1)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Lu    | ng/g   | ---         | --- | 5.1 ± 2.5   | (7)   | 4      | 2.9 - 8.5   | ---         | ---  | 5.1 ± 2.5   | (7)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Mg    | ug/g   | 6200 ± 200  | --- | 6050 ± 380  | (71)  | 6100   | 5140 - 6800 | 5820 ± 320  | (12) | 6100 ± 400  | (14) | 5840 ± 470  | (24) | 5980        | (2)  | 6125 ± 29     | (4) | 6400 ± 400 | (12) | OES    | 6300 | (1) | TCGS |
| Mg    | ug/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Mg    | ug/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Mn    | ug/g   | 91 ± 4      | --- | 89 ± 5      | (139) | 89.4   | 76 - 103    | 88 ± 5      | (23) | 90 ± 7      | (44) | 88 ± 7      | (30) | 90 ± 9      | (23) | 6500 ± 500    | (4) | 14NAA      | ---  |        |      |     |      |
| Mn    | ug/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Mn    | ug/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Mn    | ug/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Mo    | ng/g   | 300 ± 100   | --- | 290 ± 70    | (24)  | 280    | 200 - 410   | 320 ± 100   | (4)  | 300 ± 50    | (12) | 220 ± 40    | (4)  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Mo    | ng/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| N     | %      | 2.76 ± 0.05 | --- | 2.72 ± 0.04 | (16)  | 2.71   | 2.61 - 2.81 | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| N     | %      | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| N     | %      | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| N-15  | atom % | ---         | --- | 0.3670      | (1)   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Na    | ug/g   | 82 ± 6      | --- | 89 ± 15     | (49)  | 87     | 74 - 140    | 125.5       | (2)  | 91 ± 22     | (33) | 102 ± 25    | (6)  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Na    | ug/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Nb    | ug/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Nd    | ng/g   | ---         | --- | 510 ± 130   | (9)   | 480    | 320 - 765   | ---         | ---  | 500 ± 150   | (7)  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Ni    | ug/g   | 1.3 ± 0.2   | --- | 1.3 ± 0.2   | (59)  | 1.3    | 0.95 - 1.8  | 1.26 ± 0.14 | (15) | 1.4 ± 0.25  | (10) | 1.4 ± 0.3   | (9)  | 1.3 ± 0.3   | (10) | 1.43 ± 0.13   | (3) | PAA        | ---  |        |      |     |      |
| Ni    | ug/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| Ni    | ug/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |
| P     | ug/g   | 2100 ± 100  | --- | 2000 ± 180  | (56)  | 2000   | 1560 - 2400 | 2040 ± 90   | (6)  | 2080        | (2)  | 2000 ± 250  | (26) | 2050 ± 240  | (5)  | 1910 ± 100    | (3) | COLOR      | ---  |        |      |     |      |
| P     | ug/g   | ---         | --- | ---         | ---   | ---    | ---         | ---         | ---  | ---         | ---  | ---         | ---  | ---         | ---  | ---           | --- | ---        | ---  |        |      |     |      |

TABLE 1571-1: COMPILED DATA FOR HBS SRM 1571 ORCHARD LEAVES (cont.)

| ELE | UNITS | NBS       |    | CONSENSUS  |       | MEDIAN | RANGE       | AA        |      | NAA        |      | ICPES      |      | XRF        |          | OTHER METHODS |            |        |           |
|-----|-------|-----------|----|------------|-------|--------|-------------|-----------|------|------------|------|------------|------|------------|----------|---------------|------------|--------|-----------|
|     |       | Mean      | SD | Mean       | SD    |        |             | Mean      | SD   | Mean       | SD   | Mean       | SD   | Mean       | SD       | Mean          | SD         | Method | n         |
| Pb  | ug/g  | 45 ± 3    |    | 44 ± 3     | (124) | 44.7   | 37 - 54     | 44 ± 5    | (54) | 43 ± 2     | (4)  | 45 ± 6     | (19) | 46 ± 4     | (17)     | 37 ± 6        | (6) SSMS   | 50     | (1) AE±AF |
| Pb  | ug/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | 43.5          | (2) ICPMS  | 49.5   | (2) 14HAA |
| Pb  | ug/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | 47            | (1) IDMS   | 57     | (1) CPAA  |
| Pb  | ug/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | 46.9 ± 1.8    | (3) DCPES  | 41.8   | (1) HPLC  |
| Pd  | ng/g  | ---       |    | < 1        |       | ---    | ---         | ---       |      | < 1        |      | ---        |      | ---        |          | ---           |            | ---    |           |
| Pf  | ng/g  | ---       |    | 84 ± 26    | (4)   | 65     | 60 - 270    | ---       |      | 93 ± 24    | (3)  | ---        |      | ---        |          | 60            | (1) SSMS   | ---    |           |
| Pt  | ng/g  | ---       |    | 430 ± 670  | (3)   | 89.2   | 0.2 - 1200  | ---       |      | 430 ± 670  | (3)  | ---        |      | ---        |          | ---           |            | ---    |           |
| Rb  | ug/g  | 12 ± 1    |    | 11.4 ± 1.2 | (67)  | 11.28  | 8.5 - 14.8  | 11.5      | (1)  | 11.5 ± 1.2 | (37) | ---        |      | 11.3 ± 1.4 | (18)     | 10.9 ± 1.3    | (6) SSMS   | 11.4   | (2) 14HAA |
| S   | ug/g  | 1900      |    | 2040 ± 240 | (31)  | 1960   | 1660 - 2600 | ---       |      | ---        |      | 1930 ± 90  | (3)  | 2050 ± 330 | (10)     | 1960 ± 50     | (7) CB     | 2000   | (1) IC    |
| S   | ug/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | 1900 ± 400    | (3) TCGS   | 1690   | (1) TITR  |
| Sb  | ug/g  | 2.9 ± 0.3 |    | 2.9 ± 0.3  | (76)  | 2.9    | 2.3 - 3.5   | 2.9 ± 0.4 | (5)  | 2.9 ± 0.3  | (51) | 2.8 ± 0.4  | (5)  | ---        |          | 2600          | (2) CPAA   | 2400   | (1) TURB  |
| Sb  | ug/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | 2.3           | (1) SSMS   | 3.5    | (1) AF    |
| Sc  | ng/g  | ---       |    | 63 ± 14    | (31)  | 65     | 40 - 90     | ---       |      | 64 ± 13    | (30) | ---        |      | ---        |          | 2.7           | (1) 14HAA  | 3.2    | (1) GCMS  |
| Se  | ng/g  | 80 ± 10   |    | 81 ± 10    | (96)  | 80     | 55 - 110    | 80 ± 15   | (6)  | 86 ± 17    | (54) | 70 ± 8     | (6)  | ---        |          | 82 ± 6        | (10) FLUOR | 80     | (1) SSMS  |
| Se  | ng/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | 110           | (1) SSMS   | ---    |           |
| Si  | ug/g  | ---       |    | 550 ± 110  | (6)   | 480    | 475.8 - 750 | ---       |      | 570 ± 160  | (3)  | ---        |      | 480        | (1)      | 2400          | (1) DCPES  | 83     | (1) GCMS  |
| Sm  | ng/g  | ---       |    | 114 ± 20   | (21)  | 110    | 88 - 150    | ---       |      | 113 ± 18   | (18) | ---        |      | ---        |          | 140           | (2) TCGS   | 750    | (2) 14HAA |
| Sn  | ng/g  | ---       |    | 290 ± 60   | (7)   | 290    | 180 - 375   | ---       |      | 293 ± 10   | (3)  | 260        | (2)  | ---        |          | 375           | (1) COLOR  | 230    | (1) SSMS  |
| Sn  | ug/g  | 37 ± 1    |    | 36 ± 3     | (53)  | 36     | 28 - 44.2   | 34        | (1)  | 38 ± 3     | (13) | 35.8 ± 2.4 | (10) | 35 ± 4     | (17)     | 34 ± 11       | (3) OES    | 40.5   | (2) CPAA  |
| Sr  | ug/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | 36            | (1) ICPMS  | 35.4   | (2) 14HAA |
| Ta  | ng/g  | ---       |    | 8 ± 2      | (4)   | 7      | 5 - 10      | ---       |      | 8 ± 2      | (4)  | ---        |      | ---        |          | ---           |            | ---    |           |
| Tb  | ng/g  | ---       |    | 13 ± 3     | (9)   | 13     | 9 - 18      | ---       |      | 13 ± 3     | (9)  | ---        |      | ---        |          | ---           |            | ---    |           |
| Te  | ng/g  | 10        |    | 10.5       | (2)   | ---    | 10 - 11     | ---       |      | 11         | (1)  | ---        |      | ---        |          | ---           |            | ---    |           |
| Th  | ng/g  | 64 ± 6    |    | 58 ± 12    | (13)  | 59     | 40 - 85     | ---       |      | 58 ± 12    | (13) | ---        |      | ---        |          | ---           |            | ---    |           |
| Ti  | ug/g  | ---       |    | 20 ± 7     | (18)  | 19.3   | 6.6 - 30    | 24        | (1)  | 40         | (1)  | 8 ± 2      | (3)  | 23 ± 5     | (3)      | 28            | (2) 14HAA  | 17.2   | (1) COLOR |
| Tl  | ng/g  | ---       |    | 36 ± 3     | (4)   | 34     | 32 - 40     | 38        | (2)  | ---        |      | ---        |      | ---        |          | 33            | (2) ASV    | ---    |           |
| Tm  | ng/g  | ---       |    | 7 ± 3      | (3)   | 7      | 3.72 - 10   | ---       |      | 5.36       | (2)  | ---        |      | ---        |          | 10            | (1) SSMS   | ---    |           |
| U   | ng/g  | 29 ± 5    |    | 29 ± 3     | (21)  | 30     | 25 - 34.3   | ---       |      | 29 ± 3     | (16) | ---        |      | ---        |          | 28            | (1) NT     | 30     | (1) IDMS  |
| V   | ng/g  | ---       |    | 500 ± 110  | (38)  | 500    | 300 - 700   | 370       | (1)  | 500 ± 105  | (29) | 500 ± 60   | (3)  | ---        |          | 480           | (1) COLOR  | 670    | (2) SSMS  |
| W   | ng/g  | ---       |    | 30 ± 20    | (3)   | 20     | 16 - 50     | ---       |      | 30 ± 20    | (3)  | ---        |      | ---        |          | ---           |            | ---    |           |
| Y   | ng/g  | ---       |    | 480        | (1)   | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | 480           | (1) SSMS   | ---    |           |
| Yb  | ng/g  | ---       |    | 25 ± 5     | (10)  | 21     | 20 - 34     | ---       |      | 25 ± 5     | (9)  | ---        |      | ---        |          | 20            | (1) SSMS   | ---    |           |
| Zn  | ug/g  | 25 ± 3    |    | 25 ± 2     | (188) | 25.3   | 19 - 32     | 26 ± 3    | (43) | 26 ± 3     | (55) | 25 ± 3     | (36) | 25 ± 3     | (23)     | 28 ± 6        | (11) OES   | 29.0   | (2) POL   |
| Zn  | ug/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | 26.4 ± 1.6    | (4) AF     | 28     | (1) DCPES |
| Zn  | ug/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | 24 ± 2        | (8) SSMS   | 28     | (1) FAE   |
| Zn  | ug/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | ---        |          | ---           |            | ---    |           |
| Zr  | ug/g  | ---       |    | 2.0 ± 1.1  | (7)   | 1.7    | 0.4 - 3.8   | ---       |      | 1.85       | (2)  | ---        |      | ---        |          | 0.4           | (1) SSMS   | 3      | (1) 14HAA |
| Zr  | ug/g  | ---       |    | ---        |       | ---    | ---         | ---       |      | ---        |      | ---        |      | 3.8        | (1) CPAA | ---           |            | ---    |           |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Al (ug/g) cont.</u> |       |     |        |           |
| <                | 20    | L   | ITNA   | 74RAN 02  | 398                    | 24    |     | ITNA   | 82EHM 01  |
| <                | 100   |     | OES    | 75BOL 02  | 405                    |       | 11  | SSMS   | 85VOS 01  |
| 13               | 5     |     | RTNA   | 80SLO 01  | 407                    | 11    | 6   | ITNA   | 74HOF 01  |
| 620              | 60    |     | RTNA   | 74CAR 03  | 420                    | 58    |     | ITNA   | 77HAM 01  |
| 14000            | 1000  |     | ITNA   | 84GIB 01  | 430                    |       |     | CPAA   | 80HAN 01  |
|                  |       |     |        |           | 430                    | 40    |     | ITNA   | 74RAN 02  |
|                  |       |     |        |           | 440                    |       |     | RTNA   | 72MOR 03  |
|                  |       |     |        |           | 460                    | 7     |     | VV     | 81NON 01  |
|                  |       |     | OES    | 75JON 02  | 460                    | 33    |     | ITNA   | 79KOB 03  |
| 103              | 22    | 6   | ITNA   | 74HOF 01  | 470                    |       | 35  | ITNA   | 81GLA 03  |
| 110              | 140   | R   | AA     | 75MAN 01  | 472                    | 20    |     | ITNA   | 84NDI 01  |
| 123              | 11    | 11  | ICPES  | 81MUN 01  | 488                    |       |     | CPXRF  | 84KAU 01  |
| 128              |       |     | OES    | 75JON 11  | 500                    |       |     | ITNA   | 80CRE 01  |
| 137.2            | 16.3  | 6   | COLOR  | 85BAR 01  | 520                    | 180   |     | FAA    | 77FUJ 01  |
| 140              | 8     |     | ICPES  | 81BLA 02  | 824                    | 50    |     | ITNA   | 80SLO 01  |
| 146              | 20    |     | ICPES  | 79ABE 01  |                        |       |     |        |           |
| 151.6            | 8.9   | 6   | COLOR  | 85BAR 01  | <u>As (ug/g)</u>       |       |     |        |           |
| 157              |       |     | ICPES  | 78CAP 01  | 1.1                    |       |     | ITNA   | 78KEL 02  |
| 165              |       |     | OES    | 75JON 07  | 3.5                    | 1.6   |     | CPXRF  | 80KIR 01  |
| 187              | 27    |     | ICPES  | 84ABD 01  | 7.5                    |       |     | SSMS   | 81VER 02  |
| 196              |       |     | OES    | 75JON 06  | 8                      | 1     |     | PAA    | 80SEG 01  |
| 201              |       |     | OES    | 75JON 01  | 8.5                    | 0.3   |     | HAA    | 74LOO 01  |
| 223              |       |     | OES    | 75JON 09  | 8.66                   | 1.25  |     | ITNA   | 79REN 03  |
| 231              |       |     | OES    | 75JON 04  | 8.7                    | 0.2   |     | RTNA   | 73HEY 01  |
| 241              | 7     | 11  | ICPES  | 81MUN 01  | 8.8                    | 0.4   |     | ICPES  | 80HAA 01  |
| 243              |       |     | OES    | 75JON 08  | 8.9                    | 2.2   |     | ICPES  | 81NAD 01  |
| 251              |       |     | ICPES  | 81GOO 01  | 9                      |       |     | RTNA   | 75ABU 01  |
| 255              |       |     | OES    | 75JON 05  | 9                      | 0.4   | H   | ICPES  | 79ROB 01  |
| 278              |       |     | OES    | 75JON 10  | 9.1                    |       | 1   | IENA   | 79KUC 01  |
| 296              | 30    |     | ITNA   | 77ZIK 01  | 9.2                    |       |     | ITNA   | 79KUC 01  |
| 322              | 18    | 11  | ICPES  | 82JON 01  | 9.25                   | 0.44  |     | ITNA   | 84NDI 01  |
| 322              | 22    |     | 14NAA  | 81WIL 01  | 9.27                   |       |     | HAA    | 77IHN 01  |
| 330              |       |     | NAA    | 77LAU 01  | 9.3                    |       | 35  | HAA    | 77TAM 01  |
| 333              |       |     | ITNA   | 76BAT 01  | 9.4                    | 0.5   |     | HAA    | 84NAR 01  |
| 337              |       |     | ICPES  | 84NAD 01  | 9.4                    | 1     |     | HAA    | 76VIJ 02  |
| 343              | 460   | RD  | ITNA   | 79IMA 03  | 9.5                    |       |     | HAA    | 85IKE 01  |
| 343              | 460   | R   | ITNA   | 79IMA 01  | 9.5                    |       |     | HAA    | 81INU 01  |
| 347              | 7.5   |     | POL    | 72MAI 01  | 9.5                    |       |     | HAA    | 83ELA 01  |
| 347              | 7.5   |     | POL    | 77MAI 01  | 9.5                    |       |     | AA     | 83ELA 01  |
| 349.7            | 6.1   |     | ITNA   | 77GOO 01  | 9.5                    | 0.2   |     | RTNA   | 83DAN 01  |
| 350              |       |     | ITNA   | 78LAU 02  | 9.5                    | 0.3   | 11  | HAA    | 81RAP 01  |
| 359              | 4     |     | IENA   | 79JON 01  | 9.5                    | 0.5   |     | HAA    | 85NAR 01  |
| 372              | 20    |     | IENA   | 85GLA 02  | 9.5                    | 0.5   |     | RTNA   | 80SLO 01  |
| 377              | 21    |     | ICPES  | 79MCQ 01  | 9.5                    | 0.76  |     | RTNA   | 79HEI 04  |
| 377              | 62    |     | ICPES  | 85LIE 02  | 9.5                    | 0.8   |     | RTNA   | 79ROS 02  |
| 378              | 13    |     | ITNA   | 75RIC 01  | 9.58                   | 2.25  |     | ITNA   | 85MAD 01  |
| 380              |       |     | ITNA   | 84GLA 02  | 9.6                    |       |     | FAA    | 82HEI 01  |
| 380              | 100   |     | 14NAA  | 81WIL 02  | 9.6                    | 0.3   | 11  | HAA    | 81RAP 01  |
| 383              |       |     | ITNA   | 78CAP 01  | 9.6                    | 0.4   |     | HAA    | 85YAM 01  |
| 390              | 50    |     | AA     | 79MCQ 01  | 9.6                    | 0.5   |     | AA     | 83RAP 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>As (ug/g) cont.</u> |       |     |        |           | <u>As (ug/g) cont.</u> |       |     |        |           |
| 9.68                   | 0.14  |     | NAA    | 74HEY 01  | 10.14                  |       |     | ASV    | 78DAV 01  |
| 9.7                    |       | 11  | HAA    | 82CRO 03  | 10.2                   |       | 35  | XRF    | 77TAM 01  |
| 9.7                    | 0.12  |     | RTNA   | 72BYR 01  | 10.2                   |       |     | HAA    | 80HON 01  |
| 9.7                    | 0.2   |     | RTNA   | 73DAM 01  | 10.2                   | 0.2   |     | RTNA   | 85TIA 01  |
| 9.7                    | 0.2   |     | HAA    | 83MAH 01  | 10.2                   | 0.2   |     | HAA    | 77SMI 01  |
| 9.7                    | 0.3   |     | RTNA   | 79KAN 02  | 10.2                   | 0.2   |     | COLOR  | 77BUR 01  |
| 9.7                    | 0.3   |     | HAA    | 83MAH 04  | 10.2                   | 0.5   | 7   | RTNA   | 80GAL 02  |
| 9.7                    | 0.4   | 7   | RTNA   | 80GAL 02  | 10.2                   | 1     |     | PAA    | 74CHA 01  |
| 9.7                    | 0.4   | 7   | RTNA   | 77GIL 03  | 10.2                   | 1     |     | NAA    | 77JER 01  |
| 9.7                    | 0.4   |     | RTNA   | 78GAL 01  | 10.3                   |       |     | HAA    | 81ARA 01  |
| 9.7                    | 0.4   |     | ITNA   | 75RIC 01  | 10.3                   |       |     | FAA    | 82PER 02  |
| 9.76                   | 0.17  |     | RTNA   | 79HOE 01  | 10.3                   | 0.2   |     | HAA    | 80AGE 02  |
| 9.8                    |       |     | HAA    | 84IKE 01  | 10.3                   | 0.2   | 34  | HAA    | 78FLA 01  |
| 9.8                    | 0.1   |     | HAA    | 81KNA 01  | 10.3                   | 0.4   | 7   | RTNA   | 77GIL 03  |
| 9.8                    | 0.1   | 11  | HAA    | 81RAP 01  | 10.3                   | 0.4   | 7   | RTNA   | 80GAL 02  |
| 9.8                    | 0.3   |     | RTNA   | 82COR 01  | 10.3                   | 0.9   |     | ITNA   | 81KOS 01  |
| 9.8                    | 0.4   | H   | ICPES  | 81PIC 01  | 10.3                   | 1.6   |     | RTNA   | 79REN 01  |
| 9.8                    | 0.9   |     | COLOR  | 76VIJ 02  | 10.4                   | 0.4   |     | ITNA   | 78LAU 02  |
| 9.8                    | 0.9   |     | ESCA   | 78CAR 01  | 10.43                  | 0.22  |     | HAA    | 81UTH 01  |
| 9.8                    | 3.2   |     | XRF    | 78STA 02  | 10.5                   |       |     | ITNA   | 82AKA 01  |
| 9.85                   |       |     | HAA    | 84YAM 01  | 10.5                   |       | 1   | IENA   | 79KUC 01  |
| 9.9                    |       |     | FAA    | 83XIA 01  | 10.5                   |       |     | HAA    | 83KUM 01  |
| 9.9                    | 0.1   |     | IENA   | 78WAN 01  | 10.5                   | 0.6   |     | HAA    | 85NAR 03  |
| 9.9                    | 1.3   |     | RTNA   | 85GAU 04  | 10.5                   | 1     |     | PAA    | 76KAT 04  |
| 9.9                    | 1.6   |     | ICPES  | 85LIE 02  | 10.6                   |       |     | ASV    | 81LEE 01  |
| 9.93                   | 0.13  |     | ITNA   | 73DAM 01  | 10.6                   | 0.3   |     | 14NAA  | 81WIL 01  |
| 9.98                   | 0.31  |     | HAA    | 80TAM 01  | 10.6                   | 0.5   |     | 14NAA  | 81WIL 02  |
| 10                     |       |     | RTNA   | 79BYR 01  | 10.6                   | 0.6   | 6   | HAA    | 81KAH 01  |
| 10                     |       | 11  | HAA    | 82CRO 03  | 10.6                   | 0.8   |     | EXRF   | 73GIA 01  |
| 10                     |       |     | HAA    | 79PEA 01  | 10.6                   | 0.8   |     | RTNA   | 74ORV 01  |
| 10                     |       |     | RTNA   | 72MOR 03  | 10.7                   | 0.4   |     | FAA    | 78HAY 01  |
| 10.0                   | 0.1   | 6   | HAA    | 81KAH 01  | 10.7                   | 1     | 6   | ITNA   | 74BEC 01  |
| 10.0                   | 0.1   |     | VV     | 81NON 01  | 10.8                   |       | 6   | NAA    | 78GAN 01  |
| 10.0                   | 0.1   |     | ICPES  | 84LIV 01  | 10.8                   |       |     | FAA    | 78CAP 01  |
| 10.0                   | 0.1   |     | FAA    | 79PET 01  | 10.8                   |       |     | HAA    | 81BRO 01  |
| 10.0                   | 0.4   |     | RTNA   | 78GIL 01  | 10.8                   |       |     | IENA   | 84GLA 02  |
| 10                     | 1     | 6   | ICPES  | 85ABD 01  | 10.8                   | 0.5   |     | IENA   | 82GLA 02  |
| 10                     | 1     |     | EXRF   | 80DYC 01  | 10.8                   | 0.9   |     | RTNA   | 76MEL 01  |
| 10                     | 2     |     | COLOR  | 79MCQ 01  | 10.82                  | 0.25  |     | HAA    | 77YAS 02  |
| 10                     | 2     |     | MPOES  | 83SAR 01  | 11                     |       |     | ICPES  | 79MCQ 01  |
| 10                     | 2     |     | ITNA   | 77MIN 01  | 11                     |       |     | ICPES  | 79MCQ 02  |
| 10                     | 14    | RD  | ITNA   | 79IMA 03  | 11                     |       |     | ICPMS  | 83DOU 02  |
| 10                     | 14    | R   | ITNA   | 79IMA 01  | 11.0                   | 0.6   |     | PAA    | 78HIS 01  |
| 10.1                   |       |     | ITNA   | 80CRE 01  | 11                     | 1     |     | PAA    | 76KAT 02  |
| 10.1                   | 0.2   | 19  | ITNA   | 74RAN 02  | 11                     | 1     |     | HAA    | 76FIO 01  |
| 10.1                   | 0.3   | 7   | RTNA   | 77GIL 03  | 11.0                   | 1.5   | 7   | RTNA   | 80GAL 02  |
| 10.1                   | 0.3   |     | RTNA   | 78WEE 01  | 11                     | 2     |     | RTNA   | 77KUS 01  |
| 10.1                   | 0.3   |     | ITNA   | 80GAL 02  | 11                     | 2     |     | ITNA   | 85WAH 01  |
| 10.1                   | 0.4   |     | IENA   | 81KOS 01  | 11.0                   | 2.9   |     | ITNA   | 84TU 01   |
| 10.1                   | 0.8   |     | EXRF   | 79GIA 01  | 11                     | 3     |     | ITNA   | 772IK 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>As (ug/g) cont.</u> |       |     |        |           | <u>As (ug/g) cont.</u> |       |     |        |           |
| 11.5                   |       | 11  | SSMS   | 85VOS 01  | 14.1                   | 1.5   |     | SSMS   | 84VOS 01  |
| 11.5                   | 0.3   |     | GCMES  | 75TAL 01  | 14.3                   |       |     | XRF    | 78CAM 02  |
| 11.5                   | 0.47  |     | HAA    | 81YAN 01  | 14.3                   | 0.4   |     | EXRF   | 77NIE 01  |
| 11.5                   | 0.5   |     | HAA    | 81YAN 01  | 14.7                   | 2     |     | ITNA   | 83AHM 01  |
| 11.5                   | 1.5   |     | RTNA   | 73GOE 01  | 15                     | 0.1   |     | RTNA   | 77BAN 03  |
| 11.5                   | 1.5   | D   | RTNA   | 74GOE 01  | 15.3                   | 0.5   |     | EXRF   | 73SPA 01  |
| 11.6                   |       |     | HAA    | 77SIE 01  | 15.3                   | 1.6   |     | SSMS   | 84VOS 01  |
| 11.6                   | 0.27  | H   | HAA    | 76SIE 01  | 15.3                   | 2     |     | ITNA   | 79AHM 01  |
| 11.6                   | 1.3   |     | ITNA   | 74NAD 02  | 15.4                   | 0.2   | 19  | ITNA   | 74RAN 02  |
| 11.6                   | 1.8   |     | RTNA   | 79NIC 01  | 15.7                   | 5     |     | CPXRF  | 85CLA 01  |
| 11.7                   |       |     | NM     | 83MAR 03  | 16                     |       |     | AA     | 79HIL 01  |
| 11.8                   | 0.8   |     | SSMS   | 77DON 01  | 16                     | 2     |     | CPXRF  | 77CAM 01  |
| 11.9                   |       | H   | FAE    | 79FEL 01  | 17                     |       |     | CPXRF  | 76ZEI 01  |
| 11.9                   | 0.1   |     | FAA    | 80DUP 01  | 17                     |       |     | CPAA   | 78MCG 01  |
| 11.9                   | 0.2   |     | ITNA   | 81HAB 01  | 19                     |       | 6   | ICPES  | 85ABD 01  |
| 11.9                   | 0.6   |     | ICPES  | 83OLI 01  | 26                     |       |     | AF     | 85NAR 02  |
| 11.98                  | 0.08  | H   | ICPES  | 81PAH 01  | 38                     |       |     | EXRF   | 81PAR 01  |
| 12                     |       |     | ICPES  | 84MAR 01  |                        |       |     |        |           |
| 12                     |       |     | RTNA   | 74ERD 01  |                        |       |     |        |           |
| 12                     | 0.38  |     | HAA    | 82TAM 01  |                        |       |     |        |           |
| 12                     | 0.6   |     | AE+AF  | 82MAT 01  | 4.9                    |       |     | HAA    | 76AGG 01  |
| 12                     | 0.6   | 11  | HAA    | 82JON 01  |                        |       |     |        |           |
| 12                     | 1     |     | ITNA   | 76KUC 01  |                        |       |     |        |           |
| 12                     | 1.5   |     | RTNA   | 83BRA 01  |                        |       |     |        |           |
| 12                     | 2     |     | HAA    | 79STO 01  |                        |       |     |        |           |
| 12                     | 2.5   |     | ITNA   | 77HAM 01  |                        |       |     |        |           |
| 12                     | 2.6   |     | EXRF   | 75REU 01  |                        |       |     |        |           |
| 12                     | 3     |     | ITNA   | 81KUL 01  |                        |       |     |        |           |
| 12.15                  | 0.43  |     | NAA    | 76GUZ 01  |                        |       |     |        |           |
| 12.2                   | 0.3   |     | AA     | 84MAT 01  | 0.72                   | 0.25  |     | RTNA   | 84TJI 01  |
| 12.3                   | 0.2   |     | ITNA   | 79KOB 03  | 0.78                   | 0.15  |     | ITNA   | 79REN 03  |
| 12.3                   | 0.4   |     | RTNA   | 73TJI 01  | 0.97                   | 0.09  |     | RTNA   | 77NAD 01  |
| 12.4                   | 1     |     | ITNA   | 85NDI 01  | 1                      |       |     | RTNA   | 72MOR 03  |
| 12.5                   |       | 11  | SSMS   | 85VOS 01  | 1                      | 0.5   |     | ITNA   | 82QUR 01  |
| 12.7                   | 0.7   |     | ITNA   | 79JER 01  | 1.2                    |       | 1   | IENA   | 79KUC 01  |
| 12.7                   | 2     |     | ITNA   | 82QUR 01  | 1.4                    |       |     | ITNA   | 81KUL 01  |
| 12.9                   | 0.4   | 11  | HAA    | 82JON 01  | 1.4                    | 0.3   |     | ITNA   | 85MAD 01  |
| 12.9                   | 2.3   |     | SSMS   | 84VOS 01  | 1.4                    | 0.5   |     | IENA   | 81KOS 01  |
| 13                     | 0.1   |     | ITNA   | 75BOL 01  | 1.43                   | 0.08  |     | RTNA   | 82ZEI 01  |
| 13                     | 1     | H   | ICPES  | 82HAH 01  | 1.5                    |       |     | ITNA   | 79KUC 01  |
| 13                     | 2.4   |     | SSMS   | 84VOS 01  | 1.5                    | 0.5   |     | RTNA   | 77KUS 01  |
| 13                     | 3     |     | CPAA   | 77ZIK 01  | 1.5                    | 4     | R*  | RTNA   | 80SLO 01  |
| 13.2                   |       |     | CPXRF  | 75CAM 01  | 1.6                    | 0.2   |     | RTNA   | 83SIR 01  |
| 13.3                   |       |     | ICPES  | 85NAR 02  | 1.64                   | 0.1   |     | ITNA   | 77MIN 01  |
| 13.3                   | 0.4   |     | HAA    | 76WAU 01  | 1.8                    |       | 1   | IENA   | 79KUC 01  |
| 13.4                   | 0.93  |     | COLOR  | 73LEB 01  | 1.8                    | 0.3   |     | ITNA   | 81HAB 01  |
| 13.5                   |       |     | HAA    | 76AGG 01  | 2                      | 0.8   |     | ITNA   | 81KOS 01  |
| 13.7                   |       |     | CPXRF  | 84KAU 01  | 3.5                    | 0.6   |     | RTNA   | 74CAR 03  |
| 14                     | 1     |     | ITNA   | 78FUR 01  | 4.2                    |       |     | FAA    | 85BRO 01  |
| 14.1                   |       | 6   | NAA    | 78GAN 01  |                        |       |     |        |           |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc            | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|-----------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>B (ug/g)</u> |       |     |        |           | <u>Ba (ug/g) cont.</u> |       |     |        |           |
| 16              | 12    |     | ITNA   | 82SCH 05  | 37                     |       | 6   | ICPES  | 83BRA 02  |
| 22.55           |       | 6   | AE+AF  | 74DAU 01  | 37                     | 11    | 5   | ITNA   | 80TOU 01  |
| 23              |       |     | OES    | 75JON 10  | 37.7                   |       | 6   | ICPES  | 83BRA 02  |
| 24              | 2     |     | ICPES  | 79HER 01  | 37.9                   |       | 6   | ICPES  | 83BRA 02  |
| 25.15           |       | 6   | AE+AF  | 74DAU 01  | 37.9                   |       | 1   | IENA   | 79KUC 01  |
| 27              |       |     | OES    | 75JON 05  | 38                     |       |     | OES    | 75JON 05  |
| 27              |       |     | OES    | 75JON 02  | 38                     | 4.7   |     | CPXRF  | 80KIR 01  |
| 30              |       |     | OES    | 75JON 01  | 39.4                   |       |     | ITNA   | 79KUC 01  |
| 31              | 3     |     | ICPES  | 84PRI 01  | 40                     |       | 11  | SSMS   | 85VOS 01  |
| 31.2            | 2.8   |     | NM     | 79YAN 01  | 40                     |       |     | OES    | 75JON 03  |
| 31.5            |       |     | ICPES  | 81GOO 01  | 40                     |       |     | NAA    | 77LAU 01  |
| 31.7            |       |     | TCGS   | 84HIG 01  | 40                     | 3     | 9   | ITNA   | 78LAU 02  |
| 31.9            | 4.7   | 14  | FAA    | 79SZY 01  | 41                     | 1.3   |     | RTNA   | 77GUI 03  |
| 32              |       |     | OES    | 75JON 04  | 41                     | 4     |     | ITNA   | 79SAT 01  |
| 32              |       |     | OES    | 75JON 09  | 42                     | 2     |     | ICPES  | 79MCQ 02  |
| 32              | 4     |     | ICPES  | 79ABE 01  | 42                     | 2     |     | ICPES  | 79MCQ 01  |
| 32.2            | 0.4   |     | TCGS   | 79AND 01  | 42                     | 6     |     | ITNA   | 78LAU 02  |
| 32.5            | 0.5   |     | COLOR  | 79YAN 01  | 43                     |       |     | OES    | 75JON 11  |
| 32.8            | 2.3   | 6   | TCGS   | 76GLA 01  | 43                     | 3     |     | ITNA   | 85WAH 01  |
| 33              |       |     | OES    | 75JON 07  | 43                     | 5.7   |     | ITNA   | 77HAM 01  |
| 33              |       |     | OES    | 75JON 06  | 43.9                   |       | 1   | IENA   | 79KUC 01  |
| 33              | 2     | 11  | ICPES  | 79MIZ 01  | 44                     | 5     |     | SSMS   | 84VOS 01  |
| 33              | 4     |     | CPAA   | 80HAN 01  | 44                     | 57    | R   | AA     | 75MAN 01  |
| 33.2            | 0.1   |     | TCGS   | 79FAI 01  | 44.3                   |       |     | AA     | 74BUS 02  |
| 33.3            |       | 11  | COLOR  | 85SHI 02  | 44.8                   | 2.5   |     | IENA   | 81KOS 01  |
| 33.3            | 2.3   | 6   | TCGS   | 76GLA 01  | 45                     |       |     | ITNA   | 78CAP 01  |
| 33.4            |       | 11  | COLOR  | 85SHI 02  | 45                     |       |     | OES    | 75JON 04  |
| 33.4            | 0.7   |     | ICPES  | 81KNA 01  | 45                     | 1     |     | ICPES  | 85LIE 02  |
| 33.5            | 2.8   | 11  | ICPES  | 81MUN 01  | 45                     | 6     |     | VV     | 81NON 01  |
| 34              | 1     | 11  | ICPES  | 79MIZ 01  | 45                     | 7     |     | SSMS   | 84VOS 01  |
| 34.8            | 0.9   | 11  | ICPES  | 81MUN 01  | 45.3                   | 2.7   |     | ITNA   | 81KOS 01  |
| 35.1            | 9.9   | 14  | FAA    | 79SZY 01  | 45.6                   | 2.43  |     | ITNA   | 85MAD 01  |
| 36              |       |     | CPAA   | 81SAS 02  | 45.7                   |       |     | ICPES  | 84NAD 01  |
| 36              |       |     | OES    | 75JON 03  | 46                     |       | 6   | ICPES  | 83CHA 01  |
| 36              | 3     |     | CPAA   | 81SAS 01  | 46                     | 6     |     | ITNA   | 74RAN 02  |
| 36              | 5     |     | CPAA   | 75MCG 01  | 47                     | 3     |     | ITNA   | 81KUL 01  |
| 37              | 3     |     | ICPES  | 84SOB 01  | 47.3                   | 2.7   |     | ITNA   | 84TU 01   |
| 38              |       |     | OES    | 75JON 11  | 48                     |       | 6   | ICPES  | 83CHA 01  |
| 38              |       |     | OES    | 75JON 08  | 48                     | 8     |     | SSMS   | 84VOS 01  |
| 40              | 1     | 11  | ICPES  | 79MIZ 01  | 50                     | 14    |     | FAA    | 86GAU 01  |
|                 |       |     |        |           | 51                     |       |     | RTNA   | 72MOR 03  |
|                 |       |     |        |           | 51.3                   | 4.5   |     | PAA    | 74CHA 01  |
|                 |       |     |        |           | 51.9                   |       |     | ICPES  | 78DAH 01  |
| 0.3             | 0.1   |     | CPXRF  | 77RIN 01  | 52                     |       |     | OES    | 75JON 01  |
| 14.7            |       |     | SSMS   | 81VER 02  | 52                     | 8     |     | SSMS   | 84VOS 01  |
| 25.9            | 6.8   |     | ITNA   | 81HAB 01  | 59.54                  | 1.81  |     | ITNA   | 79REN 03  |
| 28              |       |     | ITNA   | 80CRE 01  | 62                     | 21    |     | ITNA   | 77ZIK 01  |
| 30              |       |     | NAA    | 74BEL 01  | 80                     | 22    |     | 14NAA  | 81WIL 02  |
| 35              |       | 11  | SSMS   | 85VOS 01  |                        |       |     |        |           |
| 35.9            | 7     |     | CPXRF  | 85CLA 01  |                        |       |     |        |           |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc             | Uncer | Com | Method | Reference |  | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|--|------------------------|-------|-----|--------|-----------|
| <u>Be (ng/g)</u> |       |     |        |           |  | <u>Br (ug/g) cont.</u> |       |     |        |           |
| 13.7             | 1.8   | 6   | ICPES  | 82SCH 01  |  | 9.2                    |       |     | ITNA   | 80CRE 01  |
| 14.8             | 1.6   | 6   | ICPES  | 82SCH 01  |  | 9.2                    | 0.2   |     | ITNA   | 74RAN 02  |
| 19               | 4     |     | ICPES  | 85LIE 02  |  | 9.3                    | 0.6   |     | EXRF   | 73GIA 01  |
| 26               | 1     |     | FLUOR  | 77WIC 01  |  | 9.3                    | 1.4   |     | RTNA   | 78WEE 01  |
| 26               | 3     |     | FAA    | 86GAU 01  |  | 9.4                    |       |     | ITNA   | 79KUC 01  |
| 30               | 4     |     | VV     | 74FLO 01  |  | 9.5                    |       | 1   | IENA   | 79KUC 01  |
| 36               | 4     | 11  | FAA    | 75OWE 01  |  | 9.5                    |       | 1   | IENA   | 79KUC 01  |
| 67               | 7     | 11  | FAA    | 75OWE 01  |  | 9.5                    |       |     | XRF    | 78CAM 02  |
| 110              | 10    |     | GC     | 73BLA 01  |  | 9.5                    | 0.8   |     | RTNA   | 76MEL 03  |
|                  |       |     |        |           |  | 9.5                    | 1     |     | EXRF   | 77NIE 01  |
|                  |       |     |        |           |  | 9.6                    | 1.2   | 6   | NAA    | 78GAN 01  |
|                  |       |     |        |           |  | 9.6                    | 2.8   |     | ITNA   | 77HAM 01  |
| 4                | 1     | H   | ICPES  | 81PAH 01  |  | 9.7                    | 1.1   |     | ITNA   | 78GIL 01  |
| 30               |       |     | FAA    | 77BRU 01  |  | 9.8                    | 0.78  |     | ITNA   | 77STE 02  |
| 39               |       |     | FAA    | 79INU 01  |  | 9.8                    | 0.8   |     | RTNA   | 79CRO 01  |
| 64               |       |     | FAA    | 82HEI 01  |  | 9.8                    | 1.1   |     | CPXRF  | 85CLA 01  |
| 100              |       | 11  | SSMS   | 85VOS 01  |  | 9.9                    | 0.2   |     | IENA   | 81KOS 01  |
| 100              | 10    |     | HAA    | 85YAM 01  |  | 10                     | 1     |     | ITNA   | 76KUC 01  |
| 110              | 20    |     | POL    | 72MAI 01  |  | 10                     | 2.1   |     | VV     | 81NON 01  |
| 110              | 20    |     | POL    | 77MAI 01  |  | 10                     | 2.2   |     | XRF    | 78STA 02  |
| 110              | 100   |     | POL    | 74MAI 01  |  | 10.1                   | 0.8   |     | ITNA   | 77GUI 02  |
| 160              |       |     | AF     | 85NAR 02  |  | 10.2                   | 1     |     | ITNA   | 81KUL 01  |
|                  |       |     |        |           |  | 10.5                   | 0.6   |     | ITNA   | 81KOS 01  |
|                  |       |     |        |           |  | 10.5                   | 1.4   |     | ITNA   | 79CRO 01  |
|                  |       |     |        |           |  | 10.6                   | 1.5   |     | ITNA   | 84TU 01   |
| 5                | 5     |     | ITNA   | 77ZIK 01  |  | 10.8                   | 0.4   | 35  | NAA    | 81GLA 03  |
| 6.3              | 2     |     | EXRF   | 77FLO 01  |  | 10.8                   | 0.9   | 6   | NAA    | 78GAN 01  |
| 6.6              | 0.4   |     | EXRF   | 73SPA 01  |  | 10.9                   |       |     | ITNA   | 80SAT 01  |
| 6.6              | 0.4   | 5   | IENA   | 79GLA 02  |  | 11                     |       |     | ITNA   | 78CAP 01  |
| 7.1              |       |     | EXRF   | 81BIS 01  |  | 11                     | 0.7   | 5   | ITNA   | 80TOU 01  |
| 7.3              | 3.2   |     | CPXRF  | 80KIR 01  |  | 11                     | 1.2   |     | ITNA   | 79KOB 03  |
| 7.3              | 9.3   | R   | ITNA   | 79IMA 01  |  | 11.5                   | 1.5   |     | ITNA   | 85WAH 01  |
| 7.3              | 9.3   | RD  | ITNA   | 79IMA 03  |  | 12                     | 1.3   |     | ITNA   | 79AHM 01  |
| 7.4              | 0.2   |     | ITNA   | 75RIC 01  |  | 12                     | 3     |     | ITNA   | 77ZIK 01  |
| 7.8              | 0.3   |     | EXRF   | 80DYC 01  |  | 12.1                   | 1.3   |     | ITNA   | 83AHM 01  |
| 8.2              |       |     | RTNA   | 72MOR 03  |  | 12.5                   |       |     | ITNA   | 82AKA 01  |
| 8.2              | 0.6   |     | ITNA   | 80SLO 01  |  | 34                     |       |     | EXRF   | 81PAR 01  |
| 8.3              | 0.5   | 5   | ITNA   | 80HOE 01  |  |                        |       |     |        |           |
| 8.48             | 0.07  | 5   | ITNA   | 80HOE 01  |  |                        |       |     |        |           |
| 8.5              | 0.5   | 6   | ITNA   | 74BEC 01  |  |                        |       |     |        |           |
| 8.6              |       |     | ITNA   | 85MIS 01  |  | 45.6                   | 1.2   |     | COUL   | 86CAH 01  |
| 8.7              |       |     | ITNA   | 84GLA 02  |  | 45.76                  | 0.51  |     | CB     | 82GLA 02  |
| 8.8              | 0.6   | 5   | IENA   | 79GLA 02  |  | 45.8                   | 1.3   | 35  | CB     | 79GLA 04  |
| 8.8              | 1.6   |     | EXRF   | 75REU 01  |  | 46                     | 2     |     | TCGS   | 79FAI 01  |
| 8.87             |       |     | CPXRF  | 84KAU 01  |  | 46.35                  | 0.31  |     | CB     | 80SCH 02  |
| 9.0              | 0.5   |     | EXRF   | 79GIA 01  |  | 47                     | 5     | 35  | TCGS   | 79GLA 04  |
| 9.0              | 0.5   |     | ITNA   | 78LAU 02  |  | 52                     | 5     |     | TCGS   | 79AND 01  |
| 9.0              | 0.62  |     | ITNA   | 84NDI 01  |  |                        |       |     |        |           |
| 9.1              | 0.5   |     | ITNA   | 78WEE 01  |  |                        |       |     |        |           |
| 9.19             | 1.39  |     | ITNA   | 79REN 03  |  |                        |       |     |        |           |
|                  |       |     |        |           |  |                        |       |     |        |           |
|                  |       |     |        |           |  |                        |       |     |        |           |
|                  |       |     |        |           |  |                        |       |     |        |           |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc          | Uncer | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|---------------|-------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Ca (%)</u> |       |     |        |           | <u>Ca (%) cont.</u> |       |     |        |           |
| 0.9           |       | 11  | SSMS   | 85VOS 01  | 2.04                |       |     | OES    | 75JON 03  |
| 1.58          |       | 35  | AA     | 81GLA 04  | 2.04                |       |     | AA     | 80URE 01  |
| 1.6           | 2.26  | R   | ITNA   | 79IMA 01  | 2.04                | 0.02  | 11  | AA     | 78GAI 01  |
| 1.6           | 2.26  | RD  | ITNA   | 79IMA 03  | 2.05                |       | 6   | ICPES  | 83CHA 01  |
| 1.63          |       |     | OES    | 75JON 07  | 2.05                | 0.9   |     | XRF    | 78STA 02  |
| 1.69          |       |     | AF     | 85DAV 01  | 2.06                |       |     | COLOR  | 77HAM 04  |
| 1.69          | 0.05  |     | CPXRF  | 85CLA 01  | 2.07                | 0.06  |     | IENA   | 79JON 01  |
| 1.74          |       |     | CPXRF  | 84KAU 01  | 2.07                | 0.06  | 11  | ICPES  | 81MUN 01  |
| 1.74          |       |     | OES    | 75JON 05  | 2.08                |       |     | OES    | 75JON 11  |
| 1.8           |       |     | NAA    | 77LAU 01  | 2.08                |       |     | OES    | 75JON 09  |
| 1.8           |       |     | OES    | 75JON 02  | 2.08                | 0.01  |     | PAA    | 74CHA 01  |
| 1.81          |       |     | ITNA   | 82AKA 01  | 2.08                | 0.02  | 11  | AA     | 78GAI 01  |
| 1.81          | 0.24  | 5   | ITNA   | 80TOU 01  | 2.08                | 0.04  |     | ITNA   | 79KOB 03  |
| 1.83          | 0.07  |     | CPXRF  | 80KIR 01  | 2.08                | 0.06  |     | ICPES  | 79ABE 01  |
| 1.86          | 0.1   |     | 14NAA  | 77VAN 01  | 2.09                | 0.04  | 11  | ICPES  | 81MUN 01  |
| 1.89          |       | 6   | ICPES  | 83BRA 02  | 2.1                 |       |     | ICPES  | 81GOO 01  |
| 1.90          | 0.11  |     | ITNA   | 79REN 03  | 2.1                 |       |     | ICPES  | 83KEI 01  |
| 1.91          |       |     | AA     | 77BRU 01  | 2.1                 |       |     | RTNA   | 72MOR 03  |
| 1.91          |       |     | OES    | 75JON 10  | 2.1                 | 0.05  |     | ITNA   | 81KOS 01  |
| 1.92          |       |     | EXRF   | 81BIS 01  | 2.1                 | 0.08  | 6   | EXRF   | 79MAT 01  |
| 1.93          | 0.07  |     | EXRF   | 79KUE 01  | 2.1                 | 0.2   |     | 14NAA  | 80FAA 01  |
| 1.93          | 0.09  |     | ITNA   | 77ZIK 01  | 2.1                 | 0.2   |     | ITNA   | 78LAU 02  |
| 1.94          |       |     | OES    | 75JON 04  | 2.11                |       |     | ICPES  | 81WEI 01  |
| 1.96          | 0.002 | 11  | AA     | 75ISA 01  | 2.11                |       |     | AA     | 79HIL 01  |
| 1.96          | 0.06  |     | FE     | 78KOR 01  | 2.11                | 0.08  | 6   | EXRF   | 79MAT 01  |
| 1.97          |       | 6   | ICPES  | 83BRA 02  | 2.12                | 0.07  |     | IENA   | 81KOS 01  |
| 1.97          | 0.03  | 11  | ICPES  | 82JON 01  | 2.13                |       |     | SSMS   | 81VER 02  |
| 1.97          | 0.05  |     | PAA    | 76KAT 02  | 2.13                |       |     | ITNA   | 76BAT 01  |
| 1.97          | 0.055 |     | PAA    | 76KAT 04  | 2.13                | 0.09  |     | ITNA   | 75RIC 01  |
| 1.97          | 0.08  |     | TCGS   | 79AND 01  | 2.13                | 0.11  |     | TCGS   | 79FAI 01  |
| 1.97          | 0.15  |     | 14NAA  | 81WIL 02  | 2.14                |       | 6   | ICPES  | 83CHA 01  |
| 1.98          | 0.02  |     | ICPES  | 85LIE 02  | 2.14                | 0.02  |     | ITNA   | 78FUR 01  |
| 1.98          | 0.04  | 11  | ICPES  | 82JON 01  | 2.14                | 0.11  |     | ITNA   | 84TU 01   |
| 1.98          | 0.05  |     | ICPES  | 79MCQ 02  | 2.145               | 0.017 |     | CPXRF  | 81ROB 02  |
| 1.98          | 0.07  |     | ICPES  | 79MCQ 01  | 2.15                |       |     | COLOR  | 80LAU 01  |
| 1.98          | 0.08  |     | EXRF   | 75REU 01  | 2.15                |       |     | ITNA   | 78CAP 01  |
| 1.99          |       |     | XRF    | 78CAM 02  | 2.17                |       |     | OES    | 75JON 08  |
| 1.99          | 0.06  |     | EXRF   | 77NIE 01  | 2.17                | 0.03  |     | EXRF   | 80DYC 01  |
| 2.00          |       |     | OES    | 75ISA 01  | 2.18                | 0.16  |     | AA     | 82HAR 01  |
| 2.00          | 0.08  |     | ITNA   | 80SLO 01  | 2.2                 |       |     | EXRF   | 81OHT 01  |
| 2.00          | 0.19  |     | ICPES  | 85LYO 01  | 2.2                 | 0.02  |     | ICPES  | 79HER 01  |
| 2.01          | 0.02  |     | AA     | 79MCQ 01  | 2.2                 | 0.05  |     | PAA    | 78HIS 01  |
| 2.01          | 0.18  |     | RTNA   | 80CAN 01  | 2.2                 | 0.1   |     | ITNA   | 81KUL 01  |
| 2.02          | 0.002 | 11  | AA     | 75ISA 01  | 2.21                | 0.15  |     | ITNA   | 77HAM 01  |
| 2.02          | 0.11  |     | EXRF   | 82DAK 01  | 2.23                | 0.12  |     | ITNA   | 83AHM 01  |
| 2.03          |       |     | COLOR  | 84OGU 01  | 2.26                | 0.58  |     | ICPES  | 84ABD 01  |
| 2.03          |       |     | ICPES  | 78DAH 01  | 2.28                |       |     | CPAA   | 80HAN 01  |
| 2.03          | 0.02  | 11  | ICPES  | 82JON 01  | 2.29                |       |     | OES    | 75JON 06  |
| 2.03          | 0.04  | 11  | ICPES  | 82JON 01  | 2.29                | 0.04  |     | VV     | 81NON 01  |
| 2.04          | 0.06  |     | CPAA   | 77ZIK 01  | 2.41                |       |     | OES    | 75JON 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|---------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ca (%) cont.</u> |       |     |        |           | <u>Cd (ng/g) cont.</u> |       |     |        |           |
| 2.46                | 0.09  | 5   | ITNA   | 80TOU 01  | 116                    | 10    |     | FAA    | 84GLA 02  |
| 2.6                 |       |     | ICPES  | 84NAD 01  | 116                    | 13    |     | RTNA   | 80GRE 01  |
| 2.63                |       |     | ICPES  | 78CAP 01  | 120                    |       |     | RTNA   | 85TIA 01  |
| 3.04                |       | 11  | SSMS   | 85VOS 01  | 120                    |       |     | AA     | 84SAT 02  |
| 5.01                |       |     | EXRF   | 81PAR 01  | 120                    |       | 11  | FAA    | 79HOE 02  |
|                     |       |     |        |           | 120                    |       |     | RTNA   | 74ROO 01  |
|                     |       |     |        |           | 120                    | 7     |     | AA     | 83FAG 01  |
|                     |       |     |        |           | 120                    | 10    | 11  | ASV    | 84LOC 01  |
|                     |       |     | RTNA   | 80SLO 01  | 120                    | 10    | 11  | ASV    | 84LOC 01  |
| 70                  |       |     | FAA    | 73LOO 01  | 120                    | 10    |     | IENA   | 81KOS 01  |
| 72                  | 14    |     | FAA    | 81ZAU 01  | 120                    | 10    |     | ASV    | 84LOC 01  |
| 90                  |       | 6   | AF     | 84NAR 02  | 120                    | 10    |     | RTNA   | 83BRA 01  |
| 90                  |       |     | AA     | 79HIL 01  | 120                    | 10    |     | RTNA   | 74ORV 01  |
| 90                  | 10    |     | FAA    | 80LEG 01  | 120                    | 14    |     | NAA    | 76GUZ 01  |
| 92                  | 18    |     | RTNA   | 73TJI 01  | 120                    | 20    | 11  | FAA    | 78SMI 01  |
| 95                  |       | 11  | FAA    | 79HOE 02  | 120                    | 20    | 11  | FAA    | 78SMI 01  |
| 100                 |       |     | AA     | 79NAR 01  | 120                    | 30    |     | AA     | 86GAU 01  |
| 100                 |       |     | FAA    | 80PRE 01  | 120                    | 40    | 6   | AA     | 84KAN 01  |
| 100                 |       | 11  | SSMS   | 85VOS 01  | 120                    | 50    |     | AA     | 82ROD 03  |
| 100                 |       | 6   | AF     | 84NAR 02  | 120                    | 80    | 11  | ICPES  | 82JON 01  |
| 100                 |       |     | AA     | 73LOO 01  | 130                    |       |     | ICPES  | 84MAR 01  |
| 100                 | 4     |     | ASV    | 82SAT 02  | 130                    |       |     | ICPES  | 84OHL 01  |
| 100                 | 10    |     | ASV    | 85ADE 01  | 130                    |       |     | FAA    | 82HEI 01  |
| 100                 | 10    |     | POL    | 74MAI 01  | 130                    |       |     | ICPES  | 85NAR 02  |
| 100                 | 20    |     | AA     | 83RAP 01  | 130                    | 5     |     | FAA    | 74TAL 01  |
| 100                 | 40    |     | HAA    | 82WEI 01  | 130                    | 5     | 7   | AA     | 73TAL 01  |
| 105                 |       |     | FAA    | 82HOE 01  | 130                    | 7     |     | FAA    | 74TAL 01  |
| 105                 | 5     |     | FAA    | 79STO 01  | 130                    | 7     | 7   | AA     | 73TAL 01  |
| 105                 | 10    |     | FAA    | 84ROS 01  | 130                    | 10    |     | ICPES  | 85KUM 01  |
| 106                 | 9     |     | FAA    | 74RAI 02  | 130                    | 20    |     | ITNA   | 81KOS 01  |
| 108                 | 8     |     | AE+AF  | 74RAI 02  | 130                    | 160   | 11  | ICPES  | 81MUN 01  |
| 109                 | 2     |     | FAA    | 79DAB 02  | 135                    |       |     | FAA    | 84OHL 01  |
| 110                 |       |     | AF     | 85NAR 02  | 140                    |       |     | AA     | 83ELA 01  |
| 110                 |       |     | FAA    | 82PRE 01  | 140                    | 40    |     | FAA    | 82WEI 01  |
| 110                 |       |     | FAA    | 82AKA 01  | 150                    | 50    |     | AA     | 80AGE 01  |
| 110                 |       |     | RTNA   | 79BYR 01  | 150                    | 50    |     | AA     | 76GAL 01  |
| 110                 | 6     |     | AA     | 80SCH 05  | 150                    | 60    |     | TCGS   | 79AND 01  |
| 110                 | 10    | D   | FAA    | 80SCH 08  | 160                    | 10    |     | ICPES  | 79HER 01  |
| 110                 | 10    |     | AA     | 82RIT 01  | 160                    | 16    |     | FAA    | 76URE 01  |
| 110                 | 10    |     | FAA    | 81KNA 01  | 160                    | 50    |     | RTNA   | 80VAL 01  |
| 110                 | 10    |     | ICPES  | 83SCH 04  | 160                    | 70    | 11  | ICPES  | 82JON 01  |
| 110                 | 10    |     | NAA    | 77JER 01  | 170                    |       |     | AF     | 78URE 02  |
| 110                 | 10    |     | PAA    | 74CHA 01  | 170                    | 70    | 11  | ICPES  | 82JON 01  |
| 110                 | 10    |     | AA     | 78RIT 01  | 180                    |       | 16  | AA     | 79ABO 01  |
| 110                 | 10    |     | AF     | 75EPS 01  | 190                    | 40    |     | FAA    | 77BRU 01  |
| 110                 | 10    |     | AA     | 75EPS 01  | 200                    | 80    |     | RTNA   | 76GAL 01  |
| 114                 | 18    |     | FAA    | 84GLA 11  | 200                    | 100   | 11  | ICPES  | 82JON 01  |
| 115                 | 8     |     | AA     | 84STO 01  | 230                    | 20    |     | FAA    | 73SEG 01  |
| 116                 | 8     | 7   | RTNA   | 80GAL 02  | 230                    | 60    |     | ITNA   | 74RAN 02  |
| 116                 | 8     |     | RTNA   | 78GAL 01  | 260                    | 70    | 6   | AA     | 84KAN 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cd (ng/g) cont.</u> |       |     |        |           | <u>Cl (ug/g) cont.</u> |       |     |        |           |
| 260                    | 200   |     | ICPES  | 85LIE 02  | 720                    | 15    |     | VV     | 81NON 01  |
| 350                    | 20    |     | ICPES  | 84ABD 01  | 720                    | 25    |     | ITNA   | 85WAH 01  |
| 370                    | 10    | 6   | ICPES  | 85ABD 01  | 720                    | 140   |     | PAA    | 76KAT 02  |
| 580                    |       | 16  | AA     | 79ABO 01  | 730                    | 26    |     | NAA    | 78GAN 01  |
| 660                    | 340   |     | AA     | 79MON 01  | 730                    | 30    |     | TCGS   | 79FAI 01  |
| 2000                   |       |     | AE+AF  | 79ULL 01  | 730                    | 60    |     | ITNA   | 80SLO 01  |
|                        |       |     |        |           | 732                    | 29    |     | ITNA   | 77GUI 02  |
|                        |       |     |        |           | 732                    | 29    |     | NAA    | 76MIL 02  |
|                        |       |     |        |           | 739                    |       |     | ITNA   | 76BAT 01  |
| 0.75                   | 0.067 |     | ITNA   | 77HAM 01  | 740                    | 30    |     | TCGS   | 79AND 01  |
| 0.82                   |       | 11  | SSMS   | 85VOS 01  | 740                    | 58    |     | ITNA   | 77HAM 01  |
| 0.84                   | 0.04  |     | ITNA   | 81KOS 01  | 750                    |       |     | ITNA   | 74RAN 02  |
| 0.866                  | 0.059 |     | RTNA   | 83TJI 01  | 750                    | 19    |     | ITNA   | 75RIC 01  |
| 0.9                    |       | D   | RTNA   | 82LAU 01  | 750                    | 35    |     | ITNA   | 77STE 02  |
| 0.9                    |       |     | RTNA   | 77LAU 02  | 755                    |       |     | ITNA   | 80CRE 01  |
| 0.91                   | 0.06  |     | RTNA   | 80SLO 01  | 760                    |       |     | ITNA   | 84GLA 02  |
| 0.92                   | 0.14  |     | ITNA   | 77NAD 02  | 770                    |       |     | XRF    | 78CAM 02  |
| 0.949                  | 0.076 |     | RTNA   | 86TSU 01  | 770                    | 150   |     | CPXRF  | 79REN 02  |
| 0.97                   |       |     | ITNA   | 79KUC 01  | 770                    | 240   |     | EXRF   | 77NIE 01  |
| 0.98                   | 0.05  |     | ITNA   | 78LAU 02  | 773                    | 108   |     | ITNA   | 84NDI 01  |
| 0.98                   | 0.07  |     | VV     | 81NON 01  | 790                    |       |     | RTNA   | 72MOR 03  |
| 1                      |       |     | RTNA   | 72MOR 03  | 800                    | 40    |     | IENA   | 79JON 01  |
| 1                      |       |     | NAA    | 77LAU 01  | 810                    | 150   |     | EXRF   | 80DYC 01  |
| 1.03                   | 0.07  |     | ITNA   | 84TU 01   | 838                    |       |     | ITNA   | 86GAU 01  |
| 1.05                   | 0.33  |     | RTNA   | 83SIR 01  | 950                    | 70    |     | 14NAA  | 81WIL 02  |
| 1.1                    |       |     | SSMS   | 78URE 01  |                        |       |     |        |           |
| 1.2                    | 0.2   |     | ITNA   | 81KUL 01  |                        |       |     |        |           |
| 1.25                   | 0.41  |     | ITNA   | 84ODD 01  |                        |       |     |        |           |
| 1.28                   | 0.18  |     | RTNA   | 84ODD 01  |                        |       |     |        |           |
| 1.38                   | 0.23  |     | ITNA   | 85MAD 01  |                        |       |     |        |           |
|                        |       |     |        |           | <u>Co (ng/g)</u>       |       |     |        |           |
|                        |       |     |        |           | 100                    |       |     | RTNA   | 72MOR 03  |
|                        |       |     |        |           | 105                    | 2     |     | ASV    | 85ADE 01  |
|                        |       |     |        |           | 107                    | 3     |     | VOLT   | 84ADE 02  |
|                        |       |     |        |           | 110                    | 20    | 6   | NAA    | 78GAN 01  |
|                        |       |     |        |           | 112                    | 17    |     | NAA    | 76GUZ 01  |
|                        |       |     |        |           | 120                    | 50    |     | AA     | 76GAL 01  |
|                        |       |     |        |           | 130                    |       |     | ITNA   | 78CAP 01  |
|                        |       |     |        |           | 130                    |       |     | NAA    | 77LAU 01  |
|                        |       |     |        |           | 130                    |       |     | ITNA   | 80CRE 01  |
|                        |       |     |        |           | 130                    |       |     | ITNA   | 79KUC 01  |
|                        |       |     |        |           | 130                    | 10    | D   | RTNA   | 74GOE 01  |
|                        |       |     |        |           | 130                    | 10    |     | ITNA   | 78LAU 02  |
|                        |       |     |        |           | 130                    | 10    |     | RTNA   | 73GOE 01  |
|                        |       |     |        |           | 130                    | 20    | 6   | ITNA   | 74BEC 01  |
|                        |       |     |        |           | 130                    | 20    |     | RTNA   | 77KUS 01  |
|                        |       |     |        |           | 130                    | 20    |     | RTNA   | 83SIR 01  |
|                        |       |     |        |           | 138                    | 10    |     | ITNA   | 74RAN 02  |
|                        |       |     |        |           | 140                    |       |     | NAA    | 74BEL 01  |
|                        |       |     |        |           | 140                    | 10    |     | ITNA   | 78GIL 01  |
|                        |       |     |        |           | 140                    | 30    | 6   | NAA    | 78GAN 01  |
|                        |       |     |        |           | 142                    | 7     |     | FAA    | 75HAG 01  |
|                        |       |     |        |           | 145                    |       |     | ITNA   | 82AKA 01  |
|                        |       |     |        |           |                        |       |     |        |           |
| <u>Cl (ug/g)</u>       |       |     |        |           |                        |       |     |        |           |
| 53                     |       |     | SSMS   | 81VER 02  |                        |       |     |        |           |
| 400                    | 770   | RD  | ITNA   | 79IMA 03  |                        |       |     |        |           |
| 400                    | 770   | R   | ITNA   | 79IMA 01  |                        |       |     |        |           |
| 510                    |       | 35  | ITNA   | 81GLA 03  |                        |       |     |        |           |
| 580                    | 27    |     | FAA    | 78TSU 01  |                        |       |     |        |           |
| 630                    | 24    |     | AA     | 78TSU 01  |                        |       |     |        |           |
| 632                    | 80    |     | ITNA   | 77ZIK 01  |                        |       |     |        |           |
| 638                    | 27    |     | ISE    | 81NAD 01  |                        |       |     |        |           |
| 675                    |       |     | ITNA   | 78CAP 01  |                        |       |     |        |           |
| 685                    | 32    |     | PAA    | 74CHA 01  |                        |       |     |        |           |
| 687                    | 32    |     | ITNA   | 83LI 01   |                        |       |     |        |           |
| 690                    |       |     | NAA    | 76GUZ 01  |                        |       |     |        |           |
| 700                    | 60    | 35  | ITNA   | 81GLA 04  |                        |       |     |        |           |
| 706                    | 26    |     | ITNA   | 78FUR 01  |                        |       |     |        |           |
| 715                    |       |     | CPXRF  | 84KAU 01  |                        |       |     |        |           |
| 717                    | 193   |     | PAA    | 76KAT 04  |                        |       |     |        |           |
| 719.5                  |       |     | ITNA   | 82AKA 01  |                        |       |     |        |           |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Co (ng/g) cont.</u> |       |     |        |           | <u>Cr (ug/g) cont.</u> |       |     |        |           |
| 150                    |       |     | ITNA   | 80SAT 01  | 2.0                    |       |     | AA     | 79MCQ 01  |
| 150                    |       | 1   | IENA   | 79KUC 01  | 2.0                    |       |     | ICPES  | 79MCQ 02  |
| 150                    | 20    | 11  | FAA    | 80FUD 01  | 2.0                    | 0.13  |     | GC-AA  | 76WOL 01  |
| 150                    | 30    |     | ITNA   | 76KUC 01  | 2.0                    | 0.2   | 6   | ITNA   | 74BEC 01  |
| 160                    | 10    |     | ITNA   | 82COR 01  | 2.05                   |       | 11  | AA     | 79HOE 02  |
| 160                    | 20    |     | RTNA   | 80SLO 01  | 2.2                    | 0.2   |     | ICPES  | 84SOB 01  |
| 170                    | 10    |     | ITNA   | 79KOB 03  | 2.2                    | 0.3   |     | RTNA   | 77MEL 01  |
| 170                    | 10    |     | ITNA   | 79SAT 01  | 2.2                    | 0.4   |     | VV     | 81NON 01  |
| 170                    | 10    |     | ITNA   | 84TU 01   | 2.2                    | 1     |     | CPXRF  | 80KIR 01  |
| 180                    |       |     | ITNA   | 85MIS 01  | 2.2                    | 2.9   | R   | AA     | 75MAN 01  |
| 180                    |       | 11  | SSMS   | 85VOS 01  | 2.22                   | 0.2   |     | PAA    | 74CHA 01  |
| 180                    | 20    |     | RTNA   | 77MEL 01  | 2.23                   |       | 6   | NAA    | 78GAN 01  |
| 180                    | 28    |     | ITNA   | 77HAM 01  | 2.25                   |       | 11  | AA     | 79HOE 02  |
| 180                    | 30    |     | ITNA   | 81KUL 01  | 2.28                   |       | 11  | SSMS   | 85VOS 01  |
| 190                    | 5     | 11  | FAA    | 80FUD 01  | 2.33                   |       |     | CPXRF  | 84KAU 01  |
| 190                    | 40    |     | VV     | 81NON 01  | 2.37                   | 0.07  |     | SSMS   | 72MAG 01  |
| 190                    | 100   |     | ICPES  | 85LIE 02  | 2.4                    |       |     | RTNA   | 75ABU 01  |
| 198                    | 61    |     | ITNA   | 85MAD 01  | 2.4                    |       |     | ITNA   | 79KUC 01  |
| 200                    |       |     | AA     | 84SAT 02  | 2.4                    |       |     | AA     | 83ELA 01  |
| 210                    | 20    |     | ITNA   | 81KOS 01  | 2.4                    | 0.1   |     | ITNA   | 85WAH 01  |
| 210                    | 20    | 6   | ITNA   | 74BEC 01  | 2.4                    | 0.1   | 11  | ICPES  | 82JON 01  |
| 210                    | 30    |     | ITNA   | 85WAH 01  | 2.4                    | 0.1   | 9   | ITNA   | 78LAU 02  |
| 220                    | 30    |     | ITNA   | 82QUR 01  | 2.4                    | 0.1   |     | RTNA   | 76MEL 03  |
| 220                    | 40    |     | ITNA   | 78FUR 01  | 2.4                    | 0.1   |     | CHEML  | 74LI 01   |
| 230                    | 30    |     | ITNA   | 79AHM 01  | 2.4                    | 0.3   |     | ITNA   | 78LAU 02  |
| 230                    | 30    |     | ITNA   | 83AHM 01  | 2.4                    | 0.36  |     | ITNA   | 77HAM 01  |
| 230                    | 50    |     | IENA   | 81KOS 01  | 2.4                    | 0.6   |     | ICPES  | 81BLA 02  |
| 260                    | 120   | 5   | ITNA   | 80TOU 01  | 2.4                    | 1.1   |     | CPXRF  | 85CLA 01  |
| 290                    | 100   |     | ITNA   | 77ZIK 01  | 2.46                   | 0.025 |     | RTNA   | 74MCC 01  |
| 297                    | 26    |     | COLOR  | 82KIR 01  | 2.463                  | 0.02  | 11  | RTNA   | 78MCC 01  |
| 300                    |       |     | FAA    | 82HOE 01  | 2.47                   | 0.14  |     | FAA    | 75CAR 02  |
| 300                    | 40    |     | ITNA   | 76GAL 01  | 2.495                  | 0.014 | 11  | RTNA   | 78MCC 01  |
| 320                    |       | 11  | SSMS   | 85VOS 01  | 2.5                    |       |     | RTNA   | 72MOR 03  |
| 420                    | 470   |     | ITNA   | 75RIC 01  | 2.5                    |       |     | ITNA   | 85MIS 01  |
| 460                    | 100   |     | ITNA   | 79REN 03  | 2.5                    |       | 11  | SSMS   | 85VOS 01  |
| 680                    | 80    |     | ICPES  | 84ABD 01  | 2.5                    | 0.4   |     | ITNA   | 76KUC 01  |
| 800                    | 600   |     | XRF    | 78STA 02  | 2.5                    | 1.6   |     | EXRF   | 73GIA 01  |
|                        |       |     |        |           | 2.56                   | 0.11  |     | FAA    | 83CAR 02  |
|                        |       |     |        |           | 2.574                  | 0.01  |     | ITNA   | 78MCC 01  |
|                        |       |     |        |           | 2.58                   | 0.04  |     | ITNA   | 81KOS 01  |
|                        |       |     |        |           | 2.59                   | 0.15  | 7   | FAA    | 80CHA 01  |
| 1.07                   | 0.13  | 6   | NAA    | 78GAN 01  | 2.6                    |       | 11  | AA     | 79HOE 02  |
| 1.1                    | 0.2   | 11  | ICPES  | 81MUN 01  | 2.6                    |       |     | ITNA   | 79KOB 03  |
| 1.5                    |       |     | AA     | 73LOO 03  | 2.6                    | 0.1   | 35  | FAA    | 81GLA 03  |
| 1.6                    | 0.2   | 6   | ICPES  | 85ABD 01  | 2.6                    | 0.1   |     | NM     | 80SHI 01  |
| 1.9                    |       |     | POL    | 83HOL 01  | 2.6                    | 0.2   | 6   | ITNA   | 74BEC 01  |
| 1.9                    | 0.3   | 11  | ICPES  | 81MUN 01  | 2.6                    | 0.2   | 11  | ICPES  | 82JON 01  |
| 1.9                    | 0.3   |     | ICPES  | 85LIE 02  | 2.6                    | 0.3   |     | ITNA   | 78FUR 01  |
| 1.97                   | 0.44  |     | NAA    | 76GUZ 01  | 2.6                    | 0.4   |     | ITNA   | 85NDI 01  |
| 2.0                    |       |     | NAA    | 74BEL 01  | 2.64                   | 0.2   | 7   | FAA    | 80CHA 01  |
| 2.0                    |       |     | ICPES  | 79MCQ 01  | 2.65                   | 0.16  |     |        |           |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Cr (ug/g) cont.</u> |       |     |        |           | <u>Cs (ng/g)</u> |       |     |        |           |
| 2.67                   | 0.15  | 7   | RTNA   | 80GAL 02  | 20               |       |     | NAA    | 77LAU 01  |
| 2.67                   | 0.15  |     | RTNA   | 78GAL 01  | 24               | 3     | 9   | ITNA   | 78LAU 02  |
| 2.7                    |       |     | ITNA   | 78CAP 01  | 28               | 5     |     | ITNA   | 78LAU 02  |
| 2.7                    |       |     | AA     | 81ARA 01  | 28               | 5     |     | ITNA   | 81KUL 01  |
| 2.7                    |       |     | FAA    | 82HOE 01  | 29               | 2     |     | ITNA   | 74RAN 02  |
| 2.7                    | 0.1   |     | ITNA   | 84TU 01   | 32               | 8     |     | ITNA   | 84TU 01   |
| 2.7                    | 0.17  |     | AA     | 80AGE 01  | 36               | 6     |     | ITNA   | 84GLA 11  |
| 2.7                    | 0.2   |     | AA     | 83RAP 01  | 37               | 2     |     | ITNA   | 84GLA 02  |
| 2.7                    | 0.2   |     | ITNA   | 79SAT 01  | 37.4             | 11    |     | NAA    | 76GUZ 01  |
| 2.7                    | 0.2   |     | DCPES  | 79REE 01  | 38               | 7     | 6   | ITNA   | 74BEC 01  |
| 2.7                    | 0.2   | D   | DCPES  | 81REE 01  | 40               |       | 11  | SSMS   | 85VOS 01  |
| 2.7                    | 0.3   |     | ITNA   | 82COR 01  | 40               | 9     |     | VV     | 81NON 01  |
| 2.72                   | 0.15  |     | ITNA   | 84GIB 01  | 40               | 10    |     | ITNA   | 79SAT 01  |
| 2.8                    |       |     | SSMS   | 81VER 02  | 42               |       |     | ITNA   | 80CRE 01  |
| 2.8                    |       |     | NAA    | 77LAU 01  | 42               | 1     |     | IENA   | 81KOS 01  |
| 2.8                    | 0.2   |     | ITNA   | 75RIC 01  | 44               | 2     |     | ITNA   | 85GAU 04  |
| 2.8                    | 0.2   |     | ITNA   | 79AHM 01  | 48               | 4     |     | ITNA   | 81KOS 01  |
| 2.8                    | 0.2   |     | ICPES  | 81KNA 01  | 49               | 9     |     | ITNA   | 85MAD 01  |
| 2.8                    | 0.2   |     | ITNA   | 82QUR 01  | 50               | 6     |     | ITNA   | 83AHM 01  |
| 2.8                    | 0.2   |     | ITNA   | 83AHM 01  | 50               | 10    |     | ITNA   | 85WAH 01  |
| 2.8                    | 0.4   |     | ICPES  | 84ABD 01  | 80               | 10    |     | RTNA   | 77MEL 01  |
| 2.8                    | 0.4   |     | ITNA   | 74RAN 02  | 150              | 60    |     | ITNA   | 79REN 03  |
| 2.8                    | 0.6   |     | FAA    | 74WOL 01  | 300              | 50    | 7   | RTNA   | 80GAL 02  |
| 2.82                   |       | 7   | FAA    | 80CHA 01  |                  |       |     |        |           |
| 2.9                    |       |     | RTNA   | 79TJI 01  |                  |       |     |        |           |
| 2.9                    |       |     | RTNA   | 78GOE 01  |                  |       |     |        |           |
| 2.9                    | 0.3   | D   | RTNA   | 74GOE 01  | 3.6              | 1.3   | 6   | ITNA   | 74HOF 01  |
| 2.9                    | 0.3   |     | RTNA   | 73GOE 01  | 8                |       |     | EXRF   | 82KEE 01  |
| 2.9                    | 0.4   |     | EXRF   | 80DYC 01  | 8.1              | 2     |     | EXRF   | 77FLO 01  |
| 2.9                    | 0.4   |     | SSMS   | 84VOS 01  | 8.4              | 0.8   |     | ITNA   | 78FUR 01  |
| 2.92                   | 0.28  |     | ITNA   | 85MAD 01  | 8.9              | 1.7   |     | FAA    | 77FUJ 01  |
| 3.0                    |       |     | ICPES  | 81GOO 01  | 9.4              |       |     | EXRF   | 81BIS 01  |
| 3.0                    | 0.2   |     | AA     | 76GAL 01  | 9.5              |       |     | ICPES  | 81GOO 01  |
| 3.0                    | 0.3   |     | SSMS   | 84VOS 01  | 9.6              | 0.8   |     | XRF    | 85AVA 01  |
| 3.0                    | 1     |     | ITNA   | 77ZIK 01  | 9.6              | 1.7   |     | EXRF   | 73SPA 01  |
| 3.1                    |       | 6   | ICPMS  | 83DOU 01  | 9.7              |       | 11  | SSMS   | 85VOS 01  |
| 3.14                   | 0.4   |     | ITNA   | 81HAB 01  | 9.76             | 0.61  | 9   | ITNA   | 77GAN 03  |
| 3.2                    | 0.3   |     | SSMS   | 84VOS 01  | 9.8              | 0.6   | 6   | NAA    | 78GAN 01  |
| 3.2                    | 0.3   |     | ITNA   | 81KUL 01  | 9.8              | 0.6   | 6   | NAA    | 78GAN 01  |
| 3.2                    | 0.3   |     | RTNA   | 76GAL 01  | 10               |       |     | RTNA   | 72MOR 03  |
| 3.3                    |       |     | ITNA   | 80CRE 01  | 10               | 0.7   |     | AA     | 78LIN 01  |
| 3.4                    |       | 6   | ICPMS  | 83DOU 01  | 10               | 1     |     | XRF    | 78LIN 01  |
| 3.4                    | 0.5   |     | SSMS   | 84VOS 01  | 10               | 2     |     | CPXRF  | 77CAM 01  |
| 3.4                    | 0.5   |     | ITNA   | 76GAL 01  | 10               | 2     |     | AA     | 82HAR 01  |
| 3.67                   | 0.01  |     | ICPES  | 79HER 01  | 10.1             | 1.2   |     | RTNA   | 83DAN 01  |
| 3.9                    | 15    |     | XRF    | 78STA 02  | 10.3             |       |     | AA     | 76KRI 03  |
| 5.5                    | 2.2   |     | PAA    | 80YAM 01  | 10.3             | 0.5   |     | FAA    | 82JEN 02  |
| 5.81                   | 0.84  |     | ITNA   | 79REN 03  | 10.3             | 0.6   |     | AA     | 76GAL 01  |
|                        |       |     |        |           | 10.4             | 2.4   |     | EXRF   | 75REU 01  |
|                        |       |     |        |           | 10.4             | 13.3  | RD  | ITNA   | 79IMA 03  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cu (ug/g) cont.</u> |       |     |        |           | <u>Cu (ug/g) cont.</u> |       |     |        |           |
| 10.4                   | 13.3  | R   | ITNA   | 79IMA 01  | 11.8                   | 0.4   |     | RTNA   | 85TIA 01  |
| 10.5                   | 1     |     | RTNA   | 80SLO 01  | 11.8                   | 0.7   |     | ITNA   | 79KOB 03  |
| 10.6                   | 8     |     | SSMS   | 84VOS 01  | 11.9                   |       | 11  | SSMS   | 85VOS 01  |
| 10.7                   | 0.3   | 11  | ICPES  | 81MUN 01  | 11.9                   | 0.6   |     | HPLC   | 83ICH 01  |
| 10.7                   | 0.9   |     | ITNA   | 85NDI 01  | 11.9                   | 1.4   |     | FAA    | 82GRO 01  |
| 10.8                   |       | 6   | NAA    | 72SIN 01  | 11.9                   | 1.6   |     | ASV    | 79BRI 02  |
| 10.8                   | 0.8   |     | SSMS   | 84VOS 01  | 12                     |       |     | AA     | 73LOO 03  |
| 11                     |       |     | AA     | 84SAT 02  | 12                     |       |     | AA     | 76FUK 01  |
| 11                     |       |     | ICPES  | 81WEI 01  | 12                     |       |     | XRF    | 78CAM 02  |
| 11                     |       |     | FAA    | 83ATS 01  | 12                     |       |     | FAA    | 73SEG 01  |
| 11                     |       |     | AE+AF  | 79ULL 01  | 12                     |       |     | AA     | 79HIL 01  |
| 11                     |       | 1   | AA     | 77FRY 01  | 12                     |       |     | CPAA   | 78MCG 01  |
| 11                     |       |     | OES    | 75JON 10  | 12                     |       |     | OES    | 75JON 02  |
| 11                     | 0.1   |     | ICPES  | 83SCH 04  | 12                     |       |     | CPXRF  | 76ZEI 01  |
| 11                     | 0.8   | 7   | RTNA   | 80GAL 02  | 12                     |       |     | AA     | 81ARA 01  |
| 11                     | 1     |     | ICPES  | 84SOB 01  | 12                     |       |     | ASV    | 83HOL 01  |
| 11                     | 1     |     | FAA    | 79KRA 01  | 12                     | 0.2   | 11  | ICPES  | 82JON 01  |
| 11                     | 1     |     | ICPES  | 79MCQ 02  | 12                     | 0.3   | 6   | ICPES  | 85ABD 01  |
| 11                     | 1     |     | RTNA   | 77KUS 01  | 12                     | 0.4   |     | ICPES  | 80SCH 08  |
| 11                     | 1.5   |     | AA     | 79MON 01  | 12                     | 0.4   | 11  | ICPES  | 82JON 01  |
| 11                     | 15    | R   | AA     | 75MAN 01  | 12                     | 0.5   |     | AA     | 73TAL 01  |
| 11.1                   | 1     |     | RTNA   | 82COR 01  | 12                     | 0.8   | 11  | ICPES  | 82JON 01  |
| 11.2                   |       |     | VV     | 81NON 01  | 12                     | 1     |     | AA     | 79MCQ 01  |
| 11.2                   |       | 6   | ICPES  | 83BRA 02  | 12                     | 1     |     | ICPES  | 79MCQ 01  |
| 11.2                   | 0.18  |     | AA     | 80AGE 01  | 12                     | 1     |     | AA     | 77YAN 01  |
| 11.2                   | 1     | 6   | POL    | 72SIN 01  | 12                     | 1     |     | AA     | 78RIT 01  |
| 11.2                   | 1.3   |     | ITNA   | 74RAN 02  | 12                     | 1     |     | RTNA   | 73GOE 01  |
| 11.3                   |       | 16  | AA     | 79ABO 01  | 12                     | 1     | D   | RTNA   | 74GOE 01  |
| 11.3                   |       |     | ICPMS  | 85SCI 01  | 12                     | 1.4   |     | EXRF   | 77NIE 01  |
| 11.3                   | 1     |     | SSMS   | 84VOS 01  | 12                     | 2     |     | FAA    | 77LOR 01  |
| 11.3                   | 2.3   |     | XRF    | 78STA 02  | 12                     | 2     |     | RTNA   | 74CAR 03  |
| 11.4                   |       |     | ICPES  | 78CAP 01  | 12.1                   |       | 16  | AA     | 79ABO 01  |
| 11.43                  | 0.2   |     | RTNA   | 74RAV 01  | 12.1                   |       | 6   | ICPES  | 83BRA 02  |
| 11.5                   | 0.5   |     | RTNA   | 73TJI 01  | 12.1                   | 0.2   |     | ICPES  | 81KNA 01  |
| 11.5                   | 0.6   |     | FAA    | 84GLA 02  | 12.1                   | 0.7   |     | SSMS   | 84VOS 01  |
| 11.5                   | 1     |     | POL    | 74MAI 01  | 12.1                   | 0.9   |     | ITNA   | 79SAT 01  |
| 11.5                   | 1     |     | EXRF   | 79GIA 01  | 12.1                   | 1.3   |     | PAA    | 76WIL 01  |
| 11.6                   |       |     | FAA    | 78CAP 01  | 12.2                   | 1.1   |     | ICPES  | 79ABE 01  |
| 11.6                   | 0.2   |     | AA     | 75ABU 01  | 12.3                   | 0.4   |     | ICPES  | 85LIE 02  |
| 11.6                   | 0.4   |     | RTNA   | 78GAL 01  | 12.3                   | 0.9   |     | RTNA   | 76MEL 03  |
| 11.6                   | 0.4   |     | ICPES  | 81BLA 02  | 12.3                   | 1.4   |     | VV     | 80SCH 05  |
| 11.6                   | 0.4   | 7   | RTNA   | 80GAL 02  | 12.4                   | 1.4   |     | CPXRF  | 85CLA 01  |
| 11.6                   | 0.6   | 11  | ICPES  | 81MUN 01  | 12.4                   | 1.4   | 11  | ASV    | 84LOC 01  |
| 11.7                   | 0.2   | 11  | ICPES  | 82JON 01  | 12.4                   | 1.6   |     | RTNA   | 80VAL 01  |
| 11.7                   | 0.4   |     | AA     | 83RAP 01  | 12.4                   | 1.9   |     | RTNA   | 83SIR 01  |
| 11.7                   | 1.7   |     | CPXRF  | 81ROB 02  | 12.5                   |       | 11  | AA     | 79HOE 02  |
| 11.8                   |       | 6   | ICPMS  | 83DOU 01  | 12.5                   | 0.5   | 11  | ASV    | 84LOC 01  |
| 11.8                   |       |     | RTNA   | 79BYR 01  | 12.5                   | 0.7   |     | FAA    | 74WOL 01  |
| 11.8                   | 0.3   |     | RTNA   | 78GIL 01  | 12.5                   | 0.8   |     | VV     | 79STO 01  |
| 11.8                   | 0.3   | 7   | RTNA   | 80GAL 02  | 12.5                   | 1.5   |     | FAA    | 84ROS 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cu (ug/g) cont.</u> |       |     |        |           | <u>Cu (ug/g) cont.</u> |       |     |        |           |
| 12.6                   |       | 6   | ICPMS  | 83DOU 01  | 18.1                   |       |     | CPXRF  | 75CAM 01  |
| 12.6                   | 0.6   |     | EXRF   | 73GIA 01  | 18.3                   | 6.9   |     | XRF    | 77SMI 04  |
| 12.6                   | 0.7   |     | ASV    | 84LOC 01  | 19                     |       |     | ITNA   | 78KEL 02  |
| 12.62                  | 0.85  |     | NAA    | 76GUZ 01  | 20                     |       |     | OES    | 75JON 08  |
| 12.7                   |       | 6   | POL    | 72SIN 01  | 21                     | 11    |     | CPAA   | 77ZIK 01  |
| 12.9                   |       | 6   | AA     | 72SIN 01  | 27                     |       |     | OES    | 75BOL 02  |
| 13                     |       |     | OES    | 75JON 07  | 30                     |       |     | XRF    | 80SUZ 02  |
| 13                     |       | 11  | AA     | 79HOE 02  | 35                     |       |     | EXRF   | 81PAR 01  |
| 13                     |       | 1   | AA     | 77FRY 01  |                        |       |     |        |           |
| 13                     |       |     | ICPES  | 78DAH 01  | <u>Dy (ng/g)</u>       |       |     |        |           |
| 13                     |       |     | AA     | 83ELA 01  |                        |       |     |        |           |
| 13                     | 0.1   |     | EXRF   | 85COE 02  | <                      | 100   | L   | NAA    | 77LAU 01  |
| 13                     | 0.47  | 11  | AA     | 75ISA 01  | 53                     | 8     |     | ITNA   | 77NAD 02  |
| 13                     | 1     | 35  | RTNA   | 77GLA 01  | 80                     | 7     |     | RTNA   | 84ODD 01  |
| 13                     | 1.7   |     | AA     | 84KAN 01  | 86                     | 3     |     | RTNA   | 86TSU 01  |
| 13                     | 4.2   |     | CPXRF  | 80KIR 01  | 110                    |       |     | SSMS   | 78URE 01  |
| 13.1                   |       | 6   | ICPMS  | 83DOU 01  | <u>Er (ng/g)</u>       |       |     |        |           |
| 13.1                   | 0.4   |     | ASV    | 85ADE 01  |                        |       |     |        |           |
| 13.1                   | 0.6   |     | AA     | 73THO 01  |                        |       |     |        |           |
| 13.2                   | 0.5   |     | SSMS   | 72MAG 01  | <                      | 100   |     | RTNA   | 77LAU 02  |
| 13.3                   | 0.1   |     | ICPES  | 79HER 01  | <                      | 100   | D   | RTNA   | 82LAU 01  |
| 13.4                   |       | 6   | ICPES  | 83BRA 02  | 28                     | 3     |     | RTNA   | 86TSU 01  |
| 13.4                   | 0.5   | 7   | RTNA   | 84FAR 02  | 30                     |       |     | SSMS   | 78URE 01  |
| 13.5                   | 0.6   | 7   | RTNA   | 84FAR 02  | 31                     | 4     |     | RTNA   | 84ODD 01  |
| 13.5                   | 1.5   |     | ITNA   | 82QUR 01  | <u>Eu (ng/g)</u>       |       |     |        |           |
| 13.5                   | 1.5   |     | ITNA   | 79AHM 01  | 20                     |       |     | ITNA   | 80CRE 01  |
| 13.6                   | 0.5   | 7   | RTNA   | 84FAR 02  | 20                     |       |     | SSMS   | 78URE 01  |
| 13.7                   | 1.3   | 6   | EXRF   | 79MAT 01  | 20                     | 2     |     | ITNA   | 78LAU 02  |
| 13.8                   | 1.4   |     | XRF    | 74REU 01  | 21                     |       |     | RTNA   | 77LAU 02  |
| 14                     |       |     | OES    | 75JON 03  | 21                     |       |     | RTNA   | 82LAU 01  |
| 14                     |       |     | OES    | 75JON 04  | 21                     |       | D   | RTNA   | 82LAU 01  |
| 14                     |       |     | OES    | 75JON 11  | 21                     | 1     |     | ITNA   | 74RAN 02  |
| 14                     |       |     | CPXRF  | 84KAU 01  | 22                     | 3     |     | ITNA   | 79KOB 03  |
| 14                     |       | 6   | ICPES  | 85ABD 01  | 22                     | 8     |     | RTNA   | 80SLO 01  |
| 14                     | 0.13  | 11  | AA     | 75ISA 01  | 22.6                   | 2.9   |     | ITNA   | 85MAD 01  |
| 14                     | 1     |     | EXRF   | 80DYC 01  | 23                     | 1     |     | RTNA   | 83TJI 01  |
| 14                     | 2     |     | ITNA   | 77ZIK 01  | 24                     | 4     |     | ITNA   | 77NAD 02  |
| 14                     | 4.5   | 6   | ITNA   | 74HOF 01  | 25                     | 3     |     | ITNA   | 83AHM 01  |
| 14.5                   | 1     |     | FAA    | 82KRI 01  | 26                     |       |     | NAA    | 77LAU 01  |
| 14.5                   | 4.7   |     | ITNA   | 77HAM 01  | 26                     | 1     |     | IENA   | 81KOS 01  |
| 15                     |       |     | OES    | 75JON 05  | 26                     | 5     |     | ITNA   | 84TU 01   |
| 15                     |       |     | OES    | 75ISA 01  | 27                     | 3     |     | ITNA   | 81KOS 01  |
| 15.5                   |       |     | ITNA   | 82AKA 01  | 27                     | 6     |     | ITNA   | 81KUL 01  |
| 15.5                   |       |     | SSMS   | 81VER 02  | 28                     | 1     |     | RTNA   | 86TSU 01  |
| 16                     |       |     | ICPES  | 84NAD 01  | 28                     | 6.3   |     | ITNA   | 77HAM 01  |
| 16                     |       |     | OES    | 75JON 09  | 30                     | 10    |     | RTNA   | 83SIR 01  |
| 16                     |       |     | OES    | 75JON 01  | 31                     | 4     | 6   | ITNA   | 74BEC 01  |
| 16                     | 1     |     | ICPES  | 84ABD 01  | 35                     |       |     | ITNA   | 85MIS 01  |
| 17                     |       |     | OES    | 75JON 06  | 91                     | 5     |     | RTNA   | 84ODD 01  |
| 18                     | 4     |     | ICPES  | 82AZI 02  | 120                    | 20    |     | RTNA   | 77KUS 01  |
|                        |       |     |        |           | 300                    |       |     | RTNA   | 72MOR 03  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>F (ug/g)</u>  |       |     |        |           | <u>Fe (ug/g) cont.</u> |       |     |        |           |
| 3.12             |       |     | COLOR  | 79DAB 01  | 260                    | 20    |     | ITNA   | 78GIL 01  |
| 3.6              |       |     | AA     | 77TSU 01  | 260                    | 20    |     | SSMS   | 84VOS 01  |
| 3.69             |       |     | COLOR  | 79DAB 01  | 261                    |       |     | SSMS   | 81VER 02  |
| 3.7              |       |     | DISE   | 83ESA 01  | 261                    | 39.1  | 11  | AA     | 75ISA 01  |
| 3.8              | 0.32  |     | ISE    | 79DAB 01  | 262                    | 5     |     | ICPES  | 79HER 01  |
| 3.88             |       |     | ISE    | 79DAB 01  | 265                    | 54    |     | RTNA   | 83SIR 01  |
| 4                | 0.3   |     | ISE    | 82GLA 02  | 266                    | 21    |     | CPXRF  | 85CLA 01  |
| 4.2              | 0.4   |     | ISE    | 84GLA 02  | 267                    |       |     | ICPES  | 78DAH 01  |
| 4.4              | 0.3   |     | ISE    | 83KNA 01  | 267                    | 2.9   |     | CPXRF  | 81ROB 02  |
| 4.8              | 1     |     | MS     | 77STE 02  | 267                    | 6     |     | ICPES  | 79MCQ 02  |
| 10               |       |     | CPAA   | 80HAN 01  | 270                    |       |     | OES    | 75BOL 02  |
| <u>Fe (ug/g)</u> |       |     |        |           | 270                    |       | 11  | SSMS   | 85VOS 01  |
|                  |       |     |        |           | 270                    |       |     | ITNA   | 80CRE 01  |
|                  |       |     |        |           | 270                    | 50    | 35  | ITNA   | 81GLA 03  |
| 121              |       |     | CPXRF  | 76ZEI 01  | 271                    | 6     | 11  | COLOR  | 82SCH 03  |
| 121              |       |     | CPAA   | 78MCG 01  | 271                    | 7     |     | RTNA   | 77MEL 01  |
| 145              | 4     | 11  | AA     | 78GAI 01  | 272                    | 16    |     | AA     | 73THO 01  |
| 151              |       |     | OES    | 75JON 09  | 273                    | 6     |     | ICPES  | 79MCQ 01  |
| 174              |       |     | OES    | 75JON 06  | 274                    | 19    |     | EXRF   | 79GIA 01  |
| 183              | 22    | 11  | ICPES  | 81MUN 01  | 276                    |       |     | OES    | 75JON 05  |
| 190              |       |     | OES    | 75JON 02  | 276                    | 8     |     | EXRF   | 73GIA 01  |
| 190              |       |     | OES    | 75JON 11  | 277                    | 4     |     | ICPES  | 85LIE 02  |
| 205              | 37    |     | ITNA   | 81HAB 01  | 278                    | 11    |     | AA     | 79MCQ 01  |
| 213              |       | 6   | ICPES  | 83BRA 02  | 279                    | 79    |     | RTNA   | 77KUS 01  |
| 213              |       |     | OES    | 75JON 03  | 280                    |       |     | NAA    | 77LAU 01  |
| 220              | 6     | 11  | AA     | 78GAI 01  | 280                    |       |     | AA     | 83ELA 01  |
| 225              | 58    |     | XRF    | 77SMI 04  | 280                    | 10    |     | ITNA   | 78LAU 02  |
| 229              |       |     | OES    | 75JON 08  | 280                    | 26    |     | ITNA   | 77HAM 01  |
| 229              | 22    |     | XRF    | 78LIN 01  | 280                    | 37    |     | ICPES  | 84ABD 01  |
| 232              |       |     | OES    | 75JON 04  | 282                    |       |     | COLOR  | 72SEI 01  |
| 235              |       |     | AA     | 76FUK 01  | 282                    | 21    |     | 14NAA  | 81WIL 02  |
| 235              |       |     | ICPES  | 78CAP 01  | 282.3                  | 9.4   | 11  | ASV    | 84LOC 01  |
| 237              | 13    |     | CHEML  | 72SEI 01  | 283                    | 3     | 11  | ICPES  | 82JON 01  |
| 238              |       |     | AA     | 76KRI 03  | 283                    | 23    |     | ITNA   | 75RIC 01  |
| 239              |       |     | OES    | 75ISA 01  | 284                    |       |     | AA     | 82WIL 04  |
| 240              | 24    |     | SSMS   | 84VOS 01  | 285                    | 5     |     | RTNA   | 80SLO 01  |
| 240              | 330   | R   | AA     | 75MAN 01  | 285                    | 5     |     | ITNA   | 79DAS 01  |
| 245              | 35    |     | ICPES  | 79ABE 01  | 285                    | 9     | 11  | COLOR  | 82SCH 03  |
| 246              |       |     | FAA    | 78CAP 01  | 287                    |       |     | AA     | 79HIL 01  |
| 250              |       |     | AA     | 73LOO 03  | 288                    | 20    |     | ICPES  | 80SCH 05  |
| 250              |       | 11  | SSMS   | 85VOS 01  | 288                    | 20    | D   | ICPES  | 80SCH 08  |
| 250              | 30    |     | RTNA   | 74CAR 03  | 288.1                  | 7.2   | 11  | ASV    | 84LOC 01  |
| 250              | 42.5  | 11  | AA     | 75ISA 01  | 290                    |       |     | FAA    | 73SEG 01  |
| 253              |       |     | ITNA   | 80SAT 01  | 290                    |       |     | RTNA   | 72MOR 03  |
| 254              | 9     |     | EXRF   | 80DYC 01  | 290                    | 2     |     | AA     | 84SAT 02  |
| 255              | 5     | 11  | COLOR  | 82SCH 03  | 290                    | 6     | 11  | ICPES  | 82JON 01  |
| 256              | 1     |     | AA     | 78LIN 01  | 290                    | 12    |     | PAA    | 74CHA 01  |
| 256              | 11    | 11  | ICPES  | 82JON 01  | 290                    | 15    | 7   | RTNA   | 80GAL 02  |
| 258              |       |     | ICPES  | 84NAD 01  | 290                    | 25    | 6   | NAA    | 78GAN 01  |
| 259              |       |     | ITNA   | 78CAP 01  | 290                    | 30    |     | CPAA   | 77ZIK 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Fe (ug/g) cont.</u> |       |     |        |           | <u>Fe (ug/g) cont.</u> |       |     |        |           |
| 290                    | 30    |     | ITNA   | 81KUL 01  | 313                    |       |     | ICPES  | 81WEI 01  |
| 290                    | 30    |     | ITNA   | 81KOS 01  | 313                    |       | 6   | ICPES  | 83BRA 02  |
| 290                    | 35    |     | IENA   | 81KOS 01  | 314                    | 40    |     | EXRF   | 75REU 01  |
| 290                    | 58    |     | SSMS   | 84VOS 01  | 315                    | 25    |     | RTNA   | 73GOE 01  |
| 291                    | 19    |     | EXRF   | 85COE 02  | 315                    | 25    | D   | RTNA   | 74GOE 01  |
| 291                    | 24    |     | VV     | 81NON 01  | 316                    |       |     | OES    | 75JON 01  |
| 292                    |       | 6   | ICPES  | 83BRA 02  | 316                    |       |     | CPXRF  | 84KAU 01  |
| 292                    | 10    |     | AA     | 83RAP 01  | 317                    | 25    |     | ICPES  | 81KNA 01  |
| 293                    |       | 6   | ICPES  | 85ABD 01  | 318.4                  | 26.9  | 6   | ITNA   | 74BEC 01  |
| 293                    |       | 11  | AA     | 79HOE 02  | 319                    | 32    |     | XRF    | 74REU 01  |
| 293                    | 14    |     | EXRF   | 77FLO 01  | 320                    | 25    | 6   | NAA    | 78GAN 01  |
| 293                    | 18    |     | EXRF   | 79KUE 01  | 325                    |       |     | ICPES  | 81GOO 01  |
| 294                    |       |     | OES    | 75JON 10  | 326                    |       |     | EXRF   | 82KEE 01  |
| 295                    |       | 11  | AA     | 79HOE 02  | 326                    | 30    |     | ITNA   | 77ZIK 01  |
| 295                    | 14    | 11  | ICPES  | 81MUN 01  | 331.5                  | 118   |     | PAA    | 76KAT 04  |
| 295.7                  | 20.1  |     | ITNA   | 82COR 01  | 332                    | 84    |     | PAA    | 76KAT 02  |
| 296                    |       |     | ICPES  | 83KEI 01  | 335                    |       |     | EXRF   | 81OHT 01  |
| 296                    | 8     |     | ITNA   | 82QUR 01  | 335                    | 14    | 6   | EXRF   | 79MAT 01  |
| 296                    | 8     |     | ITNA   | 79AHM 01  | 335                    | 40    |     | ITNA   | 84NDI 01  |
| 296                    | 12    |     | ICPES  | 81BLA 02  | 338                    | 16    | 6   | EXRF   | 79MAT 01  |
| 297                    |       |     | AA     | 81ARA 01  | 340                    | 28    |     | AA     | 82HAR 01  |
| 297                    | 6     |     | ITNA   | 85WAH 01  | 343                    | 6     |     | SSMS   | 72MAG 01  |
| 297                    | 10    |     | FAA    | 82JEN 02  | 348                    | 10    |     | 14NAA  | 81WIL 01  |
| 298                    | 8     |     | ITNA   | 83AHM 01  | 367                    |       |     | OES    | 75JON 07  |
| 298                    | 30    |     | ICPES  | 85LYO 01  | 370                    | 45    |     | CPXRF  | 77CAM 01  |
| 298.9                  | 8.1   |     | ASV    | 84LOC 01  | 422                    |       |     | CPXRF  | 75CAM 01  |
| 299                    | 1     |     | ITNA   | 79KOB 03  | 450                    | 70    |     | ITNA   | 79REN 03  |
| 300                    |       |     | NAA    | 74BEL 01  | 500                    |       |     | AE+AF  | 79ULL 01  |
| 300                    |       |     | EXRF   | 81BIS 01  | 884                    |       |     | EXRF   | 81PAR 01  |
| 300                    | 14    |     | COLOR  | 82MOR 01  |                        |       |     |        |           |
| 300                    | 17    | 11  | ICPES  | 82JON 01  | <u>Ga (ng/g)</u>       |       |     |        |           |
| 300                    | 23    |     | ITNA   | 84TU 01   | <                      | 160   | L   | IENA   | 78WAN 01  |
| 300                    | 40    |     | ITNA   | 76KUC 01  | <                      | 500   | L   | EXRF   | 79GIA 01  |
| 300                    | 45    |     | ITNA   | 74RAN 02  | 78                     | 25    |     | NAA    | 76GUZ 01  |
| 300                    | 50    |     | 14NAA  | 80FAA 01  | 86                     |       |     | RTNA   | 72MOR 03  |
| 301                    | 2.5   |     | EXRF   | 73SPA 01  | 89.3                   | 3.6   |     | RTNA   | 80STU 01  |
| 301                    | 8     |     | ICPES  | 84SØB 01  | 100                    | 10    |     | RTNA   | 77KUS 01  |
| 303                    | 32    |     | ITNA   | 79SAT 01  | <u>Gd (ng/g)</u>       |       |     |        |           |
| 304                    | 30    |     | ITNA   | 78FUR 01  | 1.64                   | 0.24  |     | ITNA   | 77NAD 02  |
| 306                    |       |     | ITNA   | 79KUC 01  | 12                     | 1     |     | RTNA   | 84ODD 01  |
| 306                    | 6     |     | EXRF   | 77NIE 01  | 81                     | 10    |     | RTNA   | 86TSU 01  |
| 309                    | 17    |     | ITNA   | 85MAD 01  | 100                    |       | D   | RTNA   | 82LAU 01  |
| 310                    |       |     | ITNA   | 85MIS 01  | 100                    |       |     | RTNA   | 77LAU 02  |
| 310                    |       |     | XRF    | 78CAM 02  | 100                    |       |     | SSMS   | 78URE 01  |
| 310                    | 31    |     | SSMS   | 84VOS 01  | 111                    | 38    |     | RTNA   | 83TJI 01  |
| 310                    | 54    |     | FAA    | 77FUJ 01  |                        |       |     |        |           |
| 311.1                  | 10.4  |     | NAA    | 76GUZ 01  |                        |       |     |        |           |
| 312                    | 11    |     | POL    | 74MAI 01  |                        |       |     |        |           |
| 312                    | 11.4  |     | POL    | 72MAI 01  |                        |       |     |        |           |
| 312                    | 11.4  |     | POL    | 77MAI 01  |                        |       |     |        |           |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ge (ng/g)</u> |       |     |        |           | <u>Hg (ng/g) cont.</u> |       |     |        |           |
| <                | 400   | L   | EXRF   | 79GIA 01  | 146                    | 12    |     | RTNA   | 82LO 01   |
| 150              |       | H   | ICPES  | 82HAH 01  | 146                    | 17    |     | NAA    | 76GUZ 01  |
| <u>H (%)</u>     |       |     |        |           | 148                    | 10    | 7   | RTNA   | 72HEI 01  |
|                  |       |     |        |           | 148                    | 16    |     | CVAA   | 82SUL 01  |
| 5.54             | 0.08  |     | TCGS   | 79FAI 01  | 150                    |       |     | AA     | 83ELA 01  |
| 5.6              | 0.1   |     | TCGS   | 79AND 01  | 150                    | 5     |     | CVAA   | 81NAR 01  |
| 5.91             | 0.3   |     | CB     | 82GLA 02  | 150                    | 5.1   |     | FAA    | 72LYO 01  |
| 6.05             | 0.07  |     | CB     | 80SCH 02  | 150                    | 10    |     | AA     | 84STO 01  |
| 6.1              | 0.1   | 35  | TCGS   | 79GLA 04  | 150                    | 10    |     | RTNA   | 83BRA 01  |
| <u>H2O- (%)</u>  |       |     |        |           | 150                    | 10    |     | FAA    | 83YAN 01  |
|                  |       |     |        |           | 150                    | 17    |     | CVAA   | 74FIT 01  |
| 11.4             |       | D   | GRAV   | 85NAR 03  | 150                    | 18    |     | ITNA   | 82LIN 01  |
| 11.4             |       |     | GRAV   | 84NAR 01  | 150                    | 40    |     | RTNA   | 83SIR 01  |
| <u>Hf (ng/g)</u> |       |     |        |           | 151                    | 7     |     | RTNA   | 84DRA 01  |
|                  |       |     |        |           | 152                    | 5     | 2   | CVAA   | 79KNE 01  |
| 13               |       |     | RTNA   | 80SLO 01  | 152                    | 6     |     | RTNA   | 76MEL 01  |
| 23               |       |     | NAA    | 77LAU 01  | 152                    | 6     |     | CVAA   | 80TON 01  |
| 27               |       |     | ITNA   | 80CRE 01  | 153                    | 8     |     | CVAA   | 80KOR 01  |
| 28               | 2     |     | ITNA   | 85WAH 01  | 153                    | 14    |     | FAA    | 75KOI 01  |
| 31               | 4     |     | ITNA   | 78LAU 02  | 154                    | 5     |     | RTNA   | 74ORV 01  |
| 34               |       |     | ITNA   | 85MIS 01  | 154                    | 13    |     | FAA    | 76DOG 01  |
| 37               | 5     |     | ITNA   | 74RAN 02  | 154                    | 13    |     | CVAA   | 78DOG 01  |
| 46               | 12    |     | ITNA   | 85MAD 01  | 154                    | 16    | 5   | RTNA   | 80GRE 01  |
| <u>Hg (ng/g)</u> |       |     |        |           | 154                    | 20    | 7   | RTNA   | 80GAL 02  |
|                  |       |     |        |           | 154                    | 20    |     | RTNA   | 78GIL 01  |
| 110              | 30    |     | RTNA   | 77BAN 03  | 154                    | 28    |     | FAA    | 74CHU 03  |
| 120              | 10    | D   | RTNA   | 74GOE 01  | 155                    | 3     |     | RTNA   | 72RAI 01  |
| 120              | 10    |     | RTNA   | 73GOE 01  | 155                    | 5.6   |     | RTNA   | 72ROO 02  |
| 120              | 10    |     | CVAA   | 84BAR 02  | 155                    | 6     |     | RTNA   | 72ROO 01  |
| 120              | 20    |     | RTNA   | 80SLO 01  | 155                    | 6     | 11  | CVAA   | 77TAG 01  |
| 122              |       | 11  | CVAA   | 79HOE 02  | 155                    | 13    | 5   | RTNA   | 80GRE 01  |
| 122              | 28    |     | ITNA   | 84TU 01   | 155                    | 15    |     | RTNA   | 73TJI 01  |
| 125              |       |     | AA     | 74RIC 01  | 157                    | 1     |     | AF     | 81EBD 01  |
| 125              |       |     | IDMS   | 74RIC 01  | 157                    | 20    |     | CVAA   | 82GLA 02  |
| 130              |       |     | CVAA   | 80NAD 01  | 158                    |       |     | ITNA   | 80SAT 01  |
| 130              |       |     | CVAA   | 83MAR 05  | 158                    |       |     | CVAA   | 84LAU 01  |
| 138              | 2     | 11  | CVAA   | 77TAG 01  | 158                    | 5     |     | RTNA   | 74RIC 01  |
| 140              |       |     | ICPES  | 84MAR 01  | 158                    | 10    |     | FAA    | 72LYO 01  |
| 140              | 10    |     | NAA    | 77JER 01  | 158                    | 16    |     | RTNA   | 77GLA 03  |
| 140              | 10    |     | PAA    | 74CHA 01  | 158                    | 16    |     | RTNA   | 82LIN 01  |
| 140              | 10    |     | ITNA   | 74FRI 01  | 159                    | 21    |     | CVAA   | 78MAT 01  |
| 140              | 20    |     | IDMS   | 72RAI 01  | 160                    |       |     | RTNA   | 79DES 01  |
| 141              | 9     |     | SSMS   | 74ALV 01  | 160                    | 6     |     | CVAA   | 72RAI 01  |
| 142              | 27    |     | CVAA   | 82DOO 01  | 160                    | 10    |     | ITNA   | 83AHM 01  |
| 146              |       |     | UU     | 74FEL 01  | 160                    | 12    |     | FAA    | 74SIE 02  |
| 146              | 6     |     | FAE    | 76CAV 01  | 160                    | 12    |     | FAA    | 72ROO 01  |
|                  |       |     |        |           | 160                    | 20    |     | FAA    | 79STO 01  |
|                  |       |     |        |           | 160                    | 20    |     | CVAA   | 82CHA 01  |
|                  |       |     |        |           | 160                    | 20    |     | FAA    | 82JEN 02  |
|                  |       |     |        |           | 160                    | 30    |     | RTNA   | 80VAL 01  |



TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc               | Uncer  | Com | Method | Reference | Conc               | Uncer | Com | Method | Reference |
|--------------------|--------|-----|--------|-----------|--------------------|-------|-----|--------|-----------|
| <u>K (%) cont.</u> |        |     |        |           | <u>K (%) cont.</u> |       |     |        |           |
| 1.42               |        |     | ITNA   | 78CAP 01  | 1.57               | 0.08  |     | EXRF   | 75REU 01  |
| 1.42               | 0.04   |     | ITNA   | 81KOS 01  | 1.57               | 0.25  |     | 14NAA  | 81WIL 01  |
| 1.42               | 0.09   |     | ITNA   | 76KUC 01  | 1.58               | 0.08  | 6   | NAA    | 78GAN 01  |
| 1.42               | 0.23   |     | ITNA   | 84TU 01   | 1.59               |       |     | OES    | 75JON 10  |
| 1.43               |        | 6   | ICPES  | 83BRA 02  | 1.62               |       |     | OES    | 75JON 06  |
| 1.43               | 0.04   |     | EXRF   | 79KUE 01  | 1.65               |       |     | ITNA   | 84TU 03   |
| 1.43               | 0.06   |     | FE     | 78KOR 01  | 1.66               | 0.8   | 6   | EXRF   | 79MAT 01  |
| 1.43               | 0.07   | 11  | ICPES  | 82JON 01  | 1.67               | 0.03  | 6   | ICPES  | 85ABD 01  |
| 1.4375             | 0.0794 |     | NAA    | 76GUZ 01  | 1.7                | 0.07  |     | ICPES  | 79HER 01  |
| 1.44               | 0.0004 | 11  | AA     | 75ISA 01  | 1.74               | 0.04  |     | EXRF   | 80DYC 01  |
| 1.44               | 0.04   |     | RTNA   | 76MEL 03  | 1.81               | 0.08  | 6   | EXRF   | 79MAT 01  |
| 1.445              | 0.11   |     | PAA    | 76KAT 04  | 3.89               |       |     | EXRF   | 81PAR 01  |
| 1.45               |        |     | ITNA   | 79KUC 01  |                    |       |     |        |           |
| 1.45               |        |     | ICPES  | 79COO 01  |                    |       |     |        |           |
| 1.45               |        |     | OES    | 75JON 01  |                    |       |     |        |           |
| 1.45               | 0.0003 | 11  | AA     | 75ISA 01  | 0.7                | 0.1   |     | ITNA   | 77ZIK 01  |
| 1.45               | 0.02   |     | AA     | 82HAR 01  | 0.8                | 0.05  |     | RTNA   | 80SLO 01  |
| 1.45               | 0.03   | 11  | ICPES  | 81MUN 01  | 0.88               | 0.07  |     | RTNA   | 83SIR 01  |
| 1.45               | 0.08   |     | PAA    | 76KAT 02  | 0.89               | 1.25  | R   | ITNA   | 79IMA 01  |
| 1.46               | 0.02   |     | ITNA   | 85WAH 01  | 0.89               | 1.25  | RD  | ITNA   | 79IMA 03  |
| 1.46               | 0.07   |     | ITNA   | 83AHM 01  | 0.95               |       |     | ITNA   | 79KUC 01  |
| 1.46               | 0.07   |     | ITNA   | 79AHM 01  | 0.98               |       |     | ITNA   | 80CRE 01  |
| 1.46               | 0.11   |     | EXRF   | 82DAK 01  | 0.99               | 0.08  | 6   | ITNA   | 74BEC 01  |
| 1.46               | 0.14   |     | 14NAA  | 80FAA 01  | 1.0                |       |     | RTNA   | 77LAU 02  |
| 1.46               | 0.2    |     | 14NAA  | 81WIL 02  | 1.0                |       |     | NAA    | 77LAU 01  |
| 1.47               |        |     | NAA    | 77LAU 01  | 1.0                |       |     | NAA    | 74BEL 01  |
| 1.47               | 0.02   | 11  | ICPES  | 82JON 01  | 1.0                |       | D   | RTNA   | 82LAU 01  |
| 1.47               | 0.07   | 11  | ICPES  | 82JON 01  | 1.1                |       | 11  | SSMS   | 85VOS 01  |
| 1.47               | 0.1    |     | ITNA   | 79REN 03  | 1.1                | 0.1   |     | ITNA   | 78LAU 02  |
| 1.47               | 0.12   |     | ITNA   | 79KOB 03  | 1.145              | 0.058 |     | RTNA   | 86TSU 01  |
| 1.48               |        |     | AA     | 79HIL 01  | 1.15               | 0.1   |     | IENA   | 81KOS 01  |
| 1.48               |        |     | ICPES  | 81WEI 01  | 1.17               | 0.15  |     | ITNA   | 84TU 01   |
| 1.49               |        | 1   | IENA   | 79KUC 01  | 1.18               | 0.09  |     | ITNA   | 81KOS 01  |
| 1.49               | 0.03   |     | ITNA   | 78GIL 01  | 1.2                |       |     | RTNA   | 72MOR 03  |
| 1.49               | 0.04   |     | TCGS   | 79FAI 01  | 1.2                |       |     | ITNA   | 78CAP 01  |
| 1.49               | 0.194  |     | ITNA   | 77HAM 01  | 1.2                |       |     | SSMS   | 78URE 01  |
| 1.496              | 0.043  |     | ITNA   | 78FUR 01  | 1.2                | 0.1   |     | RTNA   | 76MEL 03  |
| 1.5                |        |     | ITNA   | 78KEL 02  | 1.2                | 0.1   |     | ITNA   | 81KUL 01  |
| 1.5                |        |     | RTNA   | 72MOR 03  | 1.2                | 0.165 |     | ITNA   | 77HAM 01  |
| 1.5                |        |     | ITNA   | 76BAT 01  | 1.2                | 0.3   |     | ITNA   | 83AHM 01  |
| 1.5                | 0.05   | 11  | ICPES  | 81MUN 01  | 1.209              | 0.039 |     | RTNA   | 83TJI 01  |
| 1.5                | 0.08   |     | VV     | 81NON 01  | 1.22               | 0.02  |     | VV     | 81NON 01  |
| 1.51               |        |     | CPXRF  | 84KAU 01  | 1.23               | 0.02  |     | NM     | 85KAT 02  |
| 1.51               |        |     | XRF    | 78CAM 02  | 1.23               | 0.05  |     | ITNA   | 84NDI 01  |
| 1.51               | 0.06   |     | CPXRF  | 80KIR 01  | 1.24               | 0.08  |     | ITNA   | 79REN 03  |
| 1.51               | 0.06   |     | EXRF   | 77NIE 01  | 1.24               | 0.18  |     | ITNA   | 85MAD 01  |
| 1.54               |        |     | OES    | 75JON 08  | 1.26               | 0.2   |     | ITNA   | 85KAT 02  |
| 1.54               | 0.03   |     | ITNA   | 80SLO 01  | 1.27               |       |     | ITNA   | 85MIS 01  |
| 1.55               | 0.8    |     | XRF    | 78STA 02  | 1.27               | 0.33  |     | ITNA   | 84ODD 01  |
| 1.56               | 0.05   | 11  | ICPES  | 82JON 01  | 1.3                | 0.1   |     | ITNA   | 74RAN 02  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>La (ug/g) cont.</u> |       |     |        |           | <u>Mg (ug/g) cont.</u> |       |     |        |           |
| 1.4                    |       |     | NM     | 83KAT 01  | 5640                   | 420   |     | AA     | 86GAU 01  |
| 1.44                   | 0.2   |     | RTNA   | 84ODD 01  | 5700                   |       |     | OES    | 75JON 05  |
| 1.7                    | 0.6   |     | RTNA   | 77KUS 01  | 5700                   | 60    |     | ICPES  | 79MCQ 02  |
| 1.96                   | 0.02  |     | ITNA   | 77NAD 02  | 5700                   | 80    |     | ICPES  | 79MCQ 01  |
|                        |       |     |        |           | 5800                   | 100   | 11  | AA     | 78GAI 01  |
|                        |       |     |        |           | 5800                   | 300   |     | ICPES  | 85LYO 01  |
|                        |       |     |        |           | 5800                   | 730   |     | ITNA   | 77HAM 01  |
|                        |       |     |        |           | 5900                   |       |     | ICPES  | 84NAD 01  |
|                        |       |     |        |           | 5900                   | 1     | 11  | AA     | 75ISA 01  |
|                        |       |     |        |           | 5900                   | 300   |     | AA     | 84GLA 11  |
|                        |       |     |        |           | 5922                   | 172   | 11  | ICPES  | 81MUN 01  |
|                        |       |     |        |           | 5960                   |       |     | CPXRF  | 84KAU 01  |
|                        |       |     |        |           | 5980                   | 70    | 11  | ICPES  | 82JON 01  |
|                        |       |     |        |           | 6000                   |       |     | RTNA   | 72MOR 03  |
|                        |       |     |        |           | 6000                   |       |     | OES    | 75JON 09  |
|                        |       |     |        |           | 6000                   |       |     | OES    | 75JON 07  |
|                        |       |     |        |           | 6000                   | 2     | 11  | AA     | 75ISA 01  |
|                        |       |     |        |           | 6000                   | 100   | 11  | AA     | 78GAI 01  |
|                        |       |     |        |           | 6000                   | 200   | 11  | ICPES  | 82JON 01  |
|                        |       |     |        |           | 6000                   | 500   |     | 14NAA  | 80FAA 01  |
|                        |       |     |        |           | 6000                   | 500   |     | ITNA   | 78LAU 02  |
|                        |       |     |        |           | 6000                   | 500   |     | CPXRF  | 80KIR 01  |
|                        |       |     |        |           | 6100                   |       |     | OES    | 75JON 10  |
|                        |       |     |        |           | 6100                   |       |     | AA     | 79HIL 01  |
|                        |       |     |        |           | 6100                   |       |     | ICPES  | 83KEI 01  |
|                        |       |     |        |           | 6100                   | 100   |     | PAA    | 74CHA 01  |
|                        |       |     |        |           | 6100                   | 200   |     | PAA    | 78HIS 01  |
|                        |       |     |        |           | 6100                   | 200   | 11  | ICPES  | 82JON 01  |
|                        |       |     |        |           | 6100                   | 400   |     | ITNA   | 80SLO 01  |
|                        |       |     |        |           | 6100                   | 1100  |     | 14NAA  | 81WIL 02  |
|                        |       |     |        |           | 6150                   |       |     | ICPES  | 78DAH 01  |
|                        |       |     |        |           | 6150                   | 70    |     | PAA    | 76KAT 02  |
|                        |       |     |        |           | 6150                   | 100   |     | PAA    | 76KAT 04  |
|                        |       |     |        |           | 6173.8                 | 179   |     | NAA    | 76GUZ 01  |
|                        |       |     |        |           | 6174                   | 173   |     | ITNA   | 75PIE 01  |
|                        |       |     |        |           | 6200                   |       |     | OES    | 75JON 02  |
|                        |       |     |        |           | 6200                   |       |     | OES    | 75JON 08  |
|                        |       |     |        |           | 6200                   |       | 6   | ICPES  | 83BRA 02  |
|                        |       |     |        |           | 6200                   | 100   | 11  | ICPES  | 82JON 01  |
|                        |       |     |        |           | 6200                   | 200   | 6   | ICPES  | 85ABD 01  |
|                        |       |     |        |           | 6200                   | 400   |     | ICPES  | 84ABD 01  |
|                        |       |     |        |           | 6221                   | 153   | 11  | ICPES  | 81MUN 01  |
|                        |       |     |        |           | 6258                   | 315   |     | ITNA   | 77ZIK 01  |
|                        |       |     |        |           | 6300                   |       |     | ITNA   | 78CAP 01  |
|                        |       |     |        |           | 6300                   | 130   |     | ITNA   | 78FUR 01  |
|                        |       |     |        |           | 6300                   | 700   |     | TCGS   | 79FAI 01  |
|                        |       |     |        |           | 6400                   |       |     | OES    | 75ISA 01  |
|                        |       |     |        |           | 6400                   |       |     | ICPES  | 81WEI 01  |
|                        |       |     |        |           | 6500                   |       |     | OES    | 75JON 06  |
|                        |       |     |        |           | 6500                   | 100   |     | COLOR  | 74SLE 01  |
| <u>Li (ng/g)</u>       |       |     |        |           |                        |       |     |        |           |
| <                      | 900   | L   | CPAA   | 81SAS 01  |                        |       |     |        |           |
| 500                    | 80    |     | AA     | 84GLA 11  |                        |       |     |        |           |
| 510                    | 660   | R   | AA     | 75MAN 01  |                        |       |     |        |           |
| 570                    | 70    |     | AA     | 84GLA 02  |                        |       |     |        |           |
| 770                    | 30    |     | ITNA   | 77HEY 01  |                        |       |     |        |           |
| 800                    | 200   |     | CPAA   | 80HAN 01  |                        |       |     |        |           |
| 830                    |       |     | AA     | 85GAU 04  |                        |       |     |        |           |
| 13700                  | 1500  |     | NT     | 74CAR 02  |                        |       |     |        |           |
| 14000                  | 1000  |     | RTNA   | 85YAN 01  |                        |       |     |        |           |
| <u>Lu (ng/g)</u>       |       |     |        |           |                        |       |     |        |           |
| 0.61                   | 0.09  |     | ITNA   | 77NAD 02  |                        |       |     |        |           |
| 0.9                    | 0.1   |     | ITNA   | 81KOS 01  |                        |       |     |        |           |
| 2.9                    | 0.2   |     | RTNA   | 83TJI 01  |                        |       |     |        |           |
| 2.9                    | 0.8   |     | RTNA   | 86TSU 01  |                        |       |     |        |           |
| 3.3                    |       | D   | RTNA   | 82LAU 01  |                        |       |     |        |           |
| 3.3                    |       |     | RTNA   | 77LAU 02  |                        |       |     |        |           |
| 4                      | 2     |     | RTNA   | 83SIR 01  |                        |       |     |        |           |
| 6                      |       |     | RTNA   | 80SLO 01  |                        |       |     |        |           |
| 8.4                    | 0.7   |     | RTNA   | 84ODD 01  |                        |       |     |        |           |
| 8.5                    | 1.3   |     | ITNA   | 83AHM 01  |                        |       |     |        |           |
| 10                     |       |     | SSMS   | 78URE 01  |                        |       |     |        |           |
| <u>Mg (ug/g)</u>       |       |     |        |           |                        |       |     |        |           |
| 4000                   | 6250  | R   | ITNA   | 79IMA 01  |                        |       |     |        |           |
| 4000                   | 6250  | RD  | ITNA   | 79IMA 03  |                        |       |     |        |           |
| 4900                   |       |     | ICPES  | 78CAP 01  |                        |       |     |        |           |
| 4900                   |       | 6   | ICPES  | 83BRA 02  |                        |       |     |        |           |
| 4915                   |       |     | ICPES  | 81GOO 01  |                        |       |     |        |           |
| 5140                   | 190   |     | VV     | 81NON 01  |                        |       |     |        |           |
| 5300                   |       |     | FAA    | 78CAP 01  |                        |       |     |        |           |
| 5400                   |       |     | NAA    | 77LAU 01  |                        |       |     |        |           |
| 5400                   | 100   |     | ICPES  | 85LIE 02  |                        |       |     |        |           |
| 5500                   |       |     | AA     | 80URE 01  |                        |       |     |        |           |
| 5500                   |       | 6   | ICPES  | 85ABD 01  |                        |       |     |        |           |
| 5500                   | 300   |     | ICPES  | 79ABE 01  |                        |       |     |        |           |
| 5500                   | 300   |     | IENA   | 79JON 01  |                        |       |     |        |           |
| 5600                   |       |     | AA     | 77BRU 01  |                        |       |     |        |           |
| 5600                   |       |     | ITNA   | 84TU 03   |                        |       |     |        |           |
| 5600                   |       | 6   | ICPES  | 83BRA 02  |                        |       |     |        |           |
| 5600                   | 100   |     | AA     | 79MCQ 01  |                        |       |     |        |           |



TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Mn (ug/g) cont.</u> |       |     |        |           | <u>Mn (ug/g) cont.</u> |       |     |        |           |
| 90                     |       |     | ITNA   | 80CRE 01  | 96                     |       |     | ICPES  | 81WEI 01  |
| 90                     |       | 6   | ICPES  | 83BRA 02  | 96                     |       |     | ICPES  | 81GOO 01  |
| 90                     | 0.9   | 11  | AA     | 78GAI 01  | 96                     |       |     | OES    | 75JON 03  |
| 90                     | 1     |     | ITNA   | 80SLO 01  | 96                     | 5     |     | PAA    | 78HIS 01  |
| 90                     | 3     |     | ICPES  | 79ABE 01  | 96.2                   | 4.8   |     | AA     | 76GAL 01  |
| 90                     | 4     | 7   | RTNA   | 84FAR 02  | 96.8                   | 3.6   |     | AA     | 73THO 01  |
| 90                     | 6     |     | ITNA   | 76KUC 01  | 97                     |       |     | OES    | 75JON 10  |
| 90                     | 7     |     | ITNA   | 77HAM 01  | 97                     |       |     | CPXRF  | 84KAU 01  |
| 90                     | 12    |     | CPXRF  | 77CAM 01  | 97                     | 10    |     | ITNA   | 7721K 01  |
| 90                     | 16    |     | SSMS   | 84VOS 01  | 97.4                   |       |     | CPXRF  | 75CAM 01  |
| 90.9                   | 4.7   |     | ASV    | 84LOC 01  | 98                     |       |     | XRF    | 80SUZ 02  |
| 91                     |       |     | EXRF   | 81BIS 01  | 98                     | 20    |     | TCGS   | 79FAI 01  |
| 91                     | 0.8   | 11  | ASV    | 84LOC 01  | 98.9                   | 11    |     | CPXRF  | 85CLA 01  |
| 91                     | 2     |     | ITNA   | 85WAH 01  | 99                     | 12    |     | SSMS   | 84VOS 01  |
| 91                     | 2     | 6   | NAA    | 78GAN 01  | 100                    |       |     | ITNA   | 78KEL 02  |
| 91                     | 4     |     | FAA    | 79WES 01  | 101                    |       |     | OES    | 75JON 01  |
| 91                     | 4     |     | ICPES  | 84ABD 01  | 101                    | 5     |     | ICPES  | 84SOB 01  |
| 91.1                   | 10.9  |     | ITNA   | 85MAD 01  | 101                    | 10    |     | XRF    | 74REU 01  |
| 91.1                   | 18    |     | EXRF   | 75REU 01  | 103                    | 5     |     | VV     | 81NON 01  |
| 91.5                   |       |     | AA     | 83FAG 01  | 104                    | 9     |     | ITNA   | 84NDI 01  |
| 91.6                   | 1.08  |     | NAA    | 76GUZ 01  | 106                    | 3     | 6   | ICPES  | 85ABD 01  |
| 92                     |       |     | AA     | 76KRI 03  | 107                    |       |     | ITNA   | 84TU 03   |
| 92                     |       | 6   | ICPES  | 83CHA 01  | 107                    | 3     |     | SSMS   | 72MAG 01  |
| 92                     | 1     | D   | DCPES  | 81REE 01  | 110                    |       |     | ITNA   | 79REN 03  |
| 92                     | 1     |     | DCPES  | 79REE 01  | 110                    | 9     | 6   | EXRF   | 79MAT 01  |
| 92                     | 3     |     | ITNA   | 78FUR 01  | 131                    |       |     | OES    | 75JON 08  |
| 92                     | 3     |     | ITNA   | 75RIC 01  | 144                    |       |     | OES    | 75JON 09  |
| 92                     | 3     |     | AA     | 83RAP 01  | 242                    |       |     | EXRF   | 81PAR 01  |
| 92                     | 4     | 35  | ITNA   | 81GLA 04  |                        |       |     |        |           |
| 92                     | 17    |     | SSMS   | 84VOS 01  |                        |       |     |        |           |
| 92.4                   | 0.8   |     | ICPES  | 81KNA 01  |                        |       |     |        |           |
| 92.8                   | 4     |     | ITNA   | 83AHM 01  |                        |       |     |        |           |
| 93                     |       |     | AA     | 83ELA 01  | 110                    | 80    | 11  | ICPES  | 82JON 01  |
| 93                     |       |     | ITNA   | 80SAT 01  | 200                    |       | 11  | SSMS   | 85VOS 01  |
| 93                     |       |     | XRF    | 78CAM 02  | 200                    | 100   | 11  | FAA    | 79BEN 01  |
| 93                     |       |     | OES    | 75JON 05  | 200                    | 100   | 11  | ICPES  | 82JON 01  |
| 93                     | 6     |     | EXRF   | 77NIE 01  | 200                    | 200   | 11  | ICPES  | 82JON 01  |
| 93                     | 8     |     | XRF    | 78STA 02  | 230                    | 20    |     | COLOR  | 83MAT 02  |
| 93.8                   | 17.2  |     | PAA    | 80YAM 01  | 240                    | 20    |     | RTNA   | 78NAD 01  |
| 94                     | 3.5   | 6   | NAA    | 78GAN 01  | 240                    | 21    |     | RTNA   | 82HAD 01  |
| 94.5                   | 5     |     | PAA    | 76KAT 04  | 250                    |       | 1   | IENA   | 79KUC 01  |
| 94.8                   | 4     |     | ITNA   | 79AHM 01  | 260                    | 20    |     | FAA    | 84GOH 01  |
| 94.8                   | 4     |     | ITNA   | 82QUR 01  | 270                    | 9     |     | RTNA   | 85TIA 01  |
| 95                     |       | 6   | ICPES  | 85ABD 01  | 280                    | 20    |     | ICPES  | 82LYO 01  |
| 95                     |       |     | AE+AF  | 79ULL 01  | 280                    | 30    |     | RTNA   | 83DAN 01  |
| 95                     | 4     |     | PAA    | 76KAT 02  | 300                    | 30    | D   | RTNA   | 74GOE 01  |
| 95                     | 7.3   |     | CPXRF  | 80KIR 01  | 300                    | 30    |     | RTNA   | 73GOE 01  |
| 95                     | 12    |     | ITNA   | 79SAT 01  | 300                    | 60    |     | RTNA   | 77DIK 01  |
| 95.4                   | 2.1   |     | ITNA   | 76GAL 01  | 320                    |       | 1   | IENA   | 79KUC 01  |
| 95.7                   | 2     | 11  | ICPES  | 81MUN 01  | 320                    | 60    |     | RTNA   | 80SLO 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mo (ng/g) cont.</u> |       |     |        |           | <u>Na (ug/g)</u> |       |     |        |           |
| 320                    | 80    |     | RTNA   | 84MOK 02  | 40               |       |     | OES    | 75JON 03  |
| 327                    | 70    |     | NAA    | 76GUZ 01  | 45.8             | 6     | 11  | ICPES  | 81MUN 01  |
| 390                    | 40    |     | FAA    | 81NEU 01  | 50.5             | 1     | 11  | ICPES  | 81MUN 01  |
| 400                    | 30    |     | RTNA   | 83SIR 01  | 66               | 6     |     | ICPES  | 85LIE 02  |
| 400                    | 100   |     | PAA    | 80SEG 01  | 74               |       |     | OES    | 75JON 06  |
| 410                    |       |     | POL    | 83BOU 01  | 75               |       |     | NAA    | 77LAU 01  |
| 410                    |       |     | AA     | 83BOU 01  | 76               |       |     | NAA    | 74BEL 01  |
| 2260                   | 210   |     | PAA    | 74CHA 01  | 76               | 34    | 6   | ICPES  | 85ABD 01  |
| 2300                   |       |     | OES    | 75JON 10  | 77               |       |     | RTNA   | 72MOR 03  |
| 3300                   |       |     | OES    | 75JON 11  | 77               | 4     |     | RTNA   | 76MEL 03  |
| 4000                   | 2000  |     | CPAA   | 77ZIK 01  | 77               | 6     |     | ITNA   | 80SLO 01  |
| 4600                   |       |     | OES    | 75JON 03  | 78               | 3     |     | ITNA   | 74RAN 02  |
| 6200                   |       |     | OES    | 75JON 01  | 78               | 5     |     | ITNA   | 76KUC 01  |
| 10500                  |       |     | OES    | 75JON 07  | 79.2             | 1.8   |     | ITNA   | 84NDI 01  |
| 15200                  |       |     | OES    | 75JON 02  | 79.3             | 5     |     | PAA    | 74CHA 01  |
|                        |       |     |        |           | 80               |       |     | ITNA   | 78LAU 02  |
|                        |       |     |        |           | 80               |       |     | ITNA   | 84TU 03   |
|                        |       |     |        |           | 80               | 2     |     | FE     | 81MIZ 01  |
|                        |       |     |        |           | 80               | 3     |     | ITNA   | 85WAH 01  |
|                        |       |     |        |           | 80.6             | 1.3   |     | FE     | 78KOR 01  |
|                        |       |     |        |           | 81               |       |     | ICPES  | 81GOO 01  |
|                        |       |     |        |           | 81               |       |     | ITNA   | 79KUC 01  |
|                        |       | 11  | TITR   | 82LIA 01  | 81               | 17    |     | ITNA   | 78FUR 01  |
|                        |       | 13  | NT     | 74CAR 01  | 81.5             | 3     |     | ITNA   | 79AHM 01  |
|                        |       |     | TCGS   | 79FAI 01  | 81.6             | 3     |     | ITNA   | 83AHM 01  |
|                        |       | 35  | TCGS   | 79GLA 04  | 81.8             | 1.83  |     | NAA    | 76GUZ 01  |
|                        |       |     | 14NAA  | 77SEG 01  | 82               |       | 1   | IENA   | 79KUC 01  |
|                        |       |     | TITR   | 80GIN 01  | 83               | 5     |     | ITNA   | 75RIC 01  |
|                        |       | 11  | TITR   | 82LIA 01  | 83               | 8.5   |     | ITNA   | 77HAM 01  |
|                        |       | 11  | TITR   | 82LIA 01  | 84               | 4     |     | ITNA   | 78GIL 01  |
|                        |       |     | COLOR  | 80GIN 01  | 84.4             |       |     | ITNA   | 76BAT 01  |
|                        |       | 11  | TITR   | 82LIA 01  | 86               | 1     |     | VV     | 81NON 01  |
|                        |       | 11  | TITR   | 82LIA 01  | 86               | 5     |     | ITNA   | 77ZIK 01  |
|                        |       |     | GRAV   | 74CAR 01  | 87               |       |     | CPAA   | 80HAN 01  |
|                        |       | 13  | NT     | 74CAR 01  | 87               | 11    |     | PAA    | 76KAT 02  |
|                        |       |     | TCGS   | 79AND 01  | 87               | 16    |     | PAA    | 76KAT 04  |
|                        |       |     |        |           | 88               | 6.8   |     | ITNA   | 79KOB 03  |
|                        |       |     |        |           | 88               | 142   | R   | ITNA   | 79IMA 01  |
|                        |       |     |        |           | 88               | 142   | RD  | ITNA   | 79IMA 03  |
|                        |       |     |        |           | 89               | 17    |     | AA     | 82HAR 01  |
|                        |       |     |        |           | 90               | 8     |     | ITNA   | 81KOS 01  |
|                        |       |     |        |           | 92               |       |     | ITNA   | 80CRE 01  |
|                        |       |     |        |           | 92               |       | 35  | ITNA   | 81GLA 04  |
|                        |       |     |        |           | 93               | 14    |     | ICPES  | 84ABD 01  |
|                        |       |     |        |           | 99.8             | 6.7   |     | ITNA   | 85MAD 01  |
|                        |       |     |        |           | 100              |       |     | OES    | 75JON 01  |
|                        |       |     |        |           | 100              |       |     | OES    | 75JON 05  |
|                        |       |     |        |           | 101              |       | 6   | ICPES  | 85ABD 01  |
|                        |       |     |        |           | 103.5            |       |     | ITNA   | 82AKA 01  |
|                        |       |     |        |           | 110              |       | 35  | ITNA   | 81GLA 03  |
| <u>N (%)</u>           |       |     |        |           |                  |       |     |        |           |
| 2.59                   | 0.11  |     | CB     | 82GLA 02  | 80               | 3     |     | ITNA   | 85WAH 01  |
| 2.61                   | 0.05  |     | 14NAA  | 80FAA 01  | 80.6             | 1.3   |     | FE     | 78KOR 01  |
| 2.62                   | 0.03  |     | CB     | 80SCH 02  | 81               |       |     | ICPES  | 81GOO 01  |
| 2.7                    | 0.01  | 11  | TITR   | 82LIA 01  | 81               |       |     | ITNA   | 79KUC 01  |
| 2.7                    | 0.09  | 13  | NT     | 74CAR 01  | 81               | 17    |     | ITNA   | 78FUR 01  |
| 2.7                    | 0.09  |     | TCGS   | 79FAI 01  | 81.5             | 3     |     | ITNA   | 79AHM 01  |
| 2.7                    | 0.4   | 35  | TCGS   | 79GLA 04  | 81.6             | 3     |     | ITNA   | 83AHM 01  |
| 2.7                    | 0.4   |     | 14NAA  | 77SEG 01  | 81.8             | 1.83  |     | NAA    | 76GUZ 01  |
| 2.71                   | 0.01  |     | TITR   | 80GIN 01  | 82               |       | 1   | IENA   | 79KUC 01  |
| 2.72                   |       | 11  | TITR   | 82LIA 01  | 83               | 5     |     | ITNA   | 75RIC 01  |
| 2.74                   | 0.01  | 11  | TITR   | 82LIA 01  | 83               | 8.5   |     | ITNA   | 77HAM 01  |
| 2.74                   | 0.01  |     | COLOR  | 80GIN 01  | 84               | 4     |     | ITNA   | 78GIL 01  |
| 2.74                   | 0.02  | 11  | TITR   | 82LIA 01  | 84.4             |       |     | ITNA   | 76BAT 01  |
| 2.75                   | 0.03  | 11  | TITR   | 82LIA 01  | 86               | 1     |     | VV     | 81NON 01  |
| 2.755                  | 0.038 |     | GRAV   | 74CAR 01  | 86               | 5     |     | ITNA   | 77ZIK 01  |
| 2.76                   | 0.09  | 13  | NT     | 74CAR 01  | 87               |       |     | CPAA   | 80HAN 01  |
| 2.81                   | 0.15  |     | TCGS   | 79AND 01  | 87               | 11    |     | PAA    | 76KAT 02  |
|                        |       |     |        |           | 87               | 16    |     | PAA    | 76KAT 04  |
|                        |       |     |        |           | 88               | 6.8   |     | ITNA   | 79KOB 03  |
|                        |       |     |        |           | 88               | 142   | R   | ITNA   | 79IMA 01  |
|                        |       |     |        |           | 88               | 142   | RD  | ITNA   | 79IMA 03  |
|                        |       |     |        |           | 89               | 17    |     | AA     | 82HAR 01  |
|                        |       |     |        |           | 90               | 8     |     | ITNA   | 81KOS 01  |
|                        |       |     |        |           | 92               |       |     | ITNA   | 80CRE 01  |
|                        |       |     |        |           | 92               |       | 35  | ITNA   | 81GLA 04  |
|                        |       |     |        |           | 93               | 14    |     | ICPES  | 84ABD 01  |
|                        |       |     |        |           | 99.8             | 6.7   |     | ITNA   | 85MAD 01  |
|                        |       |     |        |           | 100              |       |     | OES    | 75JON 01  |
|                        |       |     |        |           | 100              |       |     | OES    | 75JON 05  |
|                        |       |     |        |           | 101              |       | 6   | ICPES  | 85ABD 01  |
|                        |       |     |        |           | 103.5            |       |     | ITNA   | 82AKA 01  |
|                        |       |     |        |           | 110              |       | 35  | ITNA   | 81GLA 03  |
| <u>N-15 (atom %)</u>   |       |     |        |           |                  |       |     |        |           |
| 0.367                  | 0.002 |     | MS     | 73CAR 01  |                  |       |     |        |           |





TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Pb (ug/g) cont.</u> |       |     |        |           | <u>Pb (ug/g) cont.</u> |       |     |        |           |
| 41                     | 3     |     | AA     | 84SAT 02  | 45                     |       | 6   | FAA    | 81JAC 01  |
| 41.5                   |       |     | ICPES  | 85NAR 02  | 45                     | 0.5   |     | AA     | 73TAL 01  |
| 41.8                   | 1.1   |     | HPLC   | 83ICH 01  | 45                     | 2     |     | PAA    | 74LUT 01  |
| 42                     |       | 6   | ICPMS  | 83DOU 01  | 45                     | 3.6   |     | AA     | 79MON 01  |
| 42                     |       |     | ICPES  | 84MAR 01  | 45.1                   |       |     | CPXRF  | 84KAU 01  |
| 42                     |       |     | FAA    | 82HOE 01  | 45.1                   | 2.5   |     | AA     | 84STO 01  |
| 42                     |       | 11  | SSMS   | 85VOS 01  | 45.3                   |       |     | CPXRF  | 75CAM 01  |
| 42                     |       |     | FAA    | 78URE 02  | 45.3                   | 0.7   |     | FAA    | 79DAB 02  |
| 42                     | 1     |     | ICPES  | 79MCQ 02  | 45.3                   | 0.9   |     | FAA    | 81KIT 01  |
| 42                     | 1.7   |     | AA     | 80AGE 01  | 45.3                   | 1.13  |     | FAA    | 82VAN 01  |
| 42                     | 3     |     | ICPES  | 79MCQ 01  | 45.4                   | 2     |     | EXRF   | 73GIA 01  |
| 42                     | 4     |     | ITNA   | 77GUI 02  | 45.5                   | 0.4   | 6   | FAA    | 84FUD 01  |
| 42                     | 4     |     | NAA    | 76MIL 02  | 45.5                   | 0.7   | 6   | FAA    | 84FUD 01  |
| 42                     | 9     |     | 14NAA  | 81WIL 02  | 45.5                   | 1     |     | RTNA   | 72GIB 01  |
| 42.1                   |       | 11  | HAA    | 84KUM 01  | 45.7                   | 1.3   |     | ASV    | 84LOC 01  |
| 42.2                   |       | 11  | FAA    | 79HOE 02  | 45.8                   |       | 6   | DCPES  | 84SNE 01  |
| 42.8                   | 3.1   | 11  | ASV    | 84LOC 01  | 45.9                   | 0.14  |     | FAA    | 79STO 01  |
| 42.9                   |       | 11  | FAA    | 79HOE 02  | 45.9                   | 1.2   | 11  | ASV    | 84LOC 01  |
| 43                     |       |     | FAA    | 80PRE 01  | 46                     |       | 6   | DCPES  | 84SNE 01  |
| 43                     |       |     | SSMS   | 74LUT 01  | 46                     |       |     | FAA    | 82PRE 01  |
| 43                     |       |     | EXRF   | 84PIN 01  | 46                     | 1     | 11  | ICPES  | 82JON 01  |
| 43                     | 2     |     | POT    | 84PIN 01  | 46                     | 2     |     | AA     | 77YAN 01  |
| 43.2                   | 5.1   |     | FAA    | 82JEN 02  | 46                     | 2     |     | FAA    | 79KRA 01  |
| 43.3                   |       |     | AA     | 76KRI 03  | 46                     | 2     |     | AA     | 80SCH 05  |
| 43.4                   |       | 6   | POL    | 72SIN 01  | 46                     | 2     | D   | FAA    | 80SCH 08  |
| 43.7                   | 0.9   |     | HAA    | 76VIJ 01  | 46                     | 52    | R   | AA     | 75MAN 01  |
| 44                     |       |     | FAA    | 79HEI 03  | 46.1                   | 7     |     | CPXRF  | 85CLA 01  |
| 44                     |       |     | FAA    | 73SEG 01  | 46.2                   | 3.5   | 11  | ICPES  | 81MUN 01  |
| 44                     | 2     |     | NAA    | 77JER 01  | 46.4                   |       |     | AA     | 74BOP 01  |
| 44                     | 2     |     | FAA    | 80LEG 01  | 46.5                   |       | 16  | AA     | 79ABO 01  |
| 44                     | 2     |     | AA     | 75ABU 01  | 46.5                   | 1.3   |     | XRF    | 85AVA 01  |
| 44                     | 2     | 11  | ICPES  | 82JON 01  | 46.8                   | 5.6   |     | HAA    | 82WEI 01  |
| 44                     | 2.3   | 6   | POL    | 72SIN 01  | 47                     |       |     | AA     | 79HIL 01  |
| 44                     | 4     |     | FAA    | 81KNA 01  | 47                     |       |     | ICPES  | 81WEI 01  |
| 44                     | 5     |     | FAA    | 84ROS 01  | 47                     |       | 6   | FAA    | 81JAC 01  |
| 44                     | 6     |     | FAA    | 84GLA 11  | 47                     | 0.5   |     | IDMS   | 83BRO 01  |
| 44.1                   | 3.1   | 11  | ICPES  | 81MUN 01  | 47                     | 2.5   |     | ASV    | 79BRI 02  |
| 44.1                   | 4     |     | AA     | 83RAP 01  | 47                     | 4     |     | ICPES  | 79ABE 01  |
| 44.2                   | 2.1   |     | PAA    | 74CHA 01  | 47                     | 5     |     | ASV    | 81DOG 01  |
| 44.3                   |       |     | FAA    | 79YAS 01  | 47                     | 6     |     | EXRF   | 79KUE 01  |
| 44.5                   | 1.7   |     | POL    | 74MAI 01  | 47.1                   | 4.7   |     | XRF    | 74REU 01  |
| 44.5                   | 6.2   |     | XRF    | 77SMI 04  | 47.3                   | 5.6   |     | FAA    | 82WEI 01  |
| 44.6                   | 1.7   |     | POL    | 72MAI 01  | 48                     | 5     |     | AA     | 82RIT 01  |
| 44.6                   | 1.7   |     | POL    | 77MAI 01  | 48                     | 5     |     | AA     | 78RIT 01  |
| 44.67                  | 1.53  |     | ASV    | 77KON 01  | 48.6                   | 3.8   |     | EXRF   | 75REU 01  |
| 44.7                   | 0.8   | 6   | FAA    | 84FUD 01  | 49                     |       |     | DCPES  | 78NAK 01  |
| 44.9                   |       |     | ICPES  | 78CAP 01  | 49                     | 2     |     | PAA    | 80SEG 01  |
| 44.9                   | 1     |     | ASV    | 82SAT 02  | 49                     | 5     |     | EXRF   | 77NIE 01  |
| 45                     |       | 6   | ICPMS  | 83DOU 01  | 49.3                   |       | 16  | AA     | 79ABO 01  |
| 45                     |       |     | POL    | 74LUT 01  | 49.3                   | 1.5   |     | PAA    | 80YAM 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Pb (ug/g) cont.</u> |       |     |        |           | <u>Rb (ug/g) cont.</u> |       |     |        |           |
| 49.7                   | 1.4   | 6   | FAA    | 84FUD 01  | 10                     |       |     | ITNA   | 80CRE 01  |
| 50                     |       |     | AE+AF  | 79ULL 01  | 10                     | 0.9   |     | ITNA   | 79AHM 01  |
| 50                     |       |     | FAA    | 74BRA 03  | 10                     | 1     |     | 14NAA  | 81WIL 02  |
| 50                     |       |     | AA     | 76FUK 01  | 10                     | 1     |     | EXRF   | 79KUE 01  |
| 50                     | 5     |     | EXRF   | 77FLO 01  | 10                     | 1.5   |     | CPXRF  | 80KIR 01  |
| 50                     | 11    |     | AA     | 79MCQ 01  | 10.3                   |       | 1   | IENA   | 79KUC 01  |
| 51                     | 3     |     | EXRF   | 80DYC 01  | 10.3                   | 0.6   |     | ITNA   | 74RAN 02  |
| 52.6                   |       |     | FAA    | 78CAP 01  | 10.3                   | 0.7   |     | ITNA   | 75RIC 01  |
| 54                     | 10    |     | CPXRF  | 77CAM 01  | 10.5                   |       |     | ITNA   | 79KUC 01  |
| 54.5                   | 7.2   |     | ICPES  | 82AZI 01  | 10.5                   |       |     | ITNA   | 78CAP 01  |
| 56                     | 1     | 6   | ICPES  | 85ABD 01  | 10.6                   |       | 1   | IENA   | 79KUC 01  |
| 57                     | 12    |     | 14NAA  | 81WIL 01  | 10.8                   | 0.4   |     | ITNA   | 79SAT 01  |
| 57                     | 17    |     | CPAA   | 77ZIK 01  | 10.8                   | 2     |     | SSMS   | 84VOS 01  |
| 58                     |       | 6   | ICPES  | 85ABD 01  | 10.95                  | 0.08  |     | ITNA   | 81KOS 01  |
| 67.5                   |       | 6   | DCPES  | 84SNE 01  | 11                     |       |     | RTNA   | 72MOR 03  |
| 76.1                   |       |     | AF     | 85NAR 02  | 11                     | 0.8   |     | EXRF   | 73GIA 01  |
| 85                     |       |     | OES    | 75BOL 02  | 11                     | 1     |     | ITNA   | 77ZIK 01  |
| 115                    |       |     | EXRF   | 81PAR 01  | 11                     | 1     |     | EXRF   | 80DYC 01  |
|                        |       |     |        |           | 11                     | 1     |     | ITNA   | 78LAU 02  |
|                        |       |     |        |           | 11                     | 2     |     | RTNA   | 77MEL 01  |
|                        |       |     |        |           | 11                     | 2     |     | CPXRF  | 77CAM 01  |
| <u>Pd (ng/g)</u>       |       |     |        |           | 11                     | 16    | R   | AA     | 75MAN 01  |
| <                      | 1     | L   | RTNA   | 81BYR 01  | 11.2                   | 0.3   |     | IENA   | 81KOS 01  |
|                        |       |     |        |           | 11.2                   | 0.4   |     | EXRF   | 73SPA 01  |
| <u>Pr (ng/g)</u>       |       |     |        |           | 11.2                   | 0.9   |     | ITNA   | 83AHM 01  |
| 60                     |       |     | SSMS   | 78URE 01  | 11.2                   | 1.5   |     | ITNA   | 81HAB 01  |
| 65                     | 3     |     | RTNA   | 84ODD 01  | 11.28                  | 0.42  |     | NAA    | 76GUZ 01  |
| 103                    | 15    |     | RTNA   | 86TSU 01  | 11.3                   | 2.9   | 5   | ITNA   | 80TOU 01  |
| 110                    |       |     | RTNA   | 80SLO 01  | 11.3                   | 5.2   |     | EXRF   | 75REU 01  |
| 230                    |       |     | RTNA   | 77LAU 02  | 11.4                   |       |     | EXRF   | 81BIS 01  |
| 230                    |       | D   | RTNA   | 82LAU 01  | 11.5                   |       |     | XRF    | 78CAM 02  |
| 270                    |       | 11  | SSMS   | 85VOS 01  | 11.5                   | 0.6   |     | EXRF   | 79GIA 01  |
|                        |       |     |        |           | 11.5                   | 0.9   |     | FAA    | 83GRO 02  |
| <u>Pt (ng/g)</u>       |       |     |        |           | 11.5                   | 1     |     | EXRF   | 77NIE 01  |
| <                      | 1     |     | RTNA   | 84TJI 01  | 11.6                   | 1     |     | ITNA   | 85MAD 01  |
| 0.2                    |       |     | RTNA   | 82ZEI 01  | 11.6                   | 3.4   |     | SSMS   | 84VOS 01  |
| 89.2                   | 15.4  |     | RTNA   | 77NAD 01  | 11.7                   | 0.1   |     | ITNA   | 78GIL 01  |
| 1200                   | 300   |     | RTNA   | 74CAR 03  | 11.8                   |       |     | ITNA   | 80SAT 01  |
|                        |       |     |        |           | 11.8                   | 1.2   | 35  | ITNA   | 81GLA 03  |
|                        |       |     |        |           | 11.9                   | 0.8   |     | NAA    | 78GAN 01  |
| <u>Rb (ug/g)</u>       |       |     |        |           | 12                     |       |     | NAA    | 74BEL 01  |
| 5                      | 2     |     | EXRF   | 77FLO 01  | 12                     | 0.04  |     | ITNA   | 78FUR 01  |
| 8.5                    | 0.6   |     | EXRF   | 85COE 02  | 12                     | 0.7   |     | ITNA   | 82COR 01  |
| 9.8                    |       | 11  | SSMS   | 85VOS 01  | 12                     | 1.1   | 6   | ITNA   | 74BEC 01  |
| 9.8                    | 1.3   |     | XRF    | 77SMI 04  | 12                     | 1.5   |     | ITNA   | 77HAM 01  |
| 9.9                    | 2.6   |     | SSMS   | 84VOS 01  | 12                     | 2     |     | ITNA   | 76KUC 01  |
| 10                     |       |     | CPXRF  | 84KAU 01  | 12.1                   | 1     | 9   | ITNA   | 78LAU 02  |
| 10                     |       | 11  | SSMS   | 85VOS 01  | 12.5                   |       |     | ITNA   | 85MIS 01  |
| 10                     |       |     | NAA    | 77LAU 01  | 12.5                   | 0.6   |     | PAA    | 78HIS 01  |
|                        |       |     |        |           | 12.5                   | 1     |     | PAA    | 76KAT 04  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Rb (ug/g) cont.</u> |       |     |        |           | <u>S (ug/g) cont.</u> |       |     |        |           |
| 12.6                   | 2.1   |     | XRF    | 78STA 02  | 2300                  | 200   |     | TCGS   | 77JUR 01  |
| 12.8                   | 0.6   |     | 14NAA  | 81WIL 01  | 2400                  |       |     | TURB   | 79BOG 01  |
| 12.8                   | 0.7   |     | CPXRF  | 85CLA 01  | 2400                  |       |     | FE     | 79BOG 01  |
| 13                     | 0.9   |     | VV     | 81NON 01  | 2600                  | 400   |     | CPAA   | 84ROU 01  |
| 13                     | 1     |     | PAA    | 76KAT 02  | 2600                  | 400   |     | CPAA   | 85FRI 01  |
| 13                     | 2     |     | ITNA   | 81KUL 01  | 2700                  | 400   |     | XRF    | 81NAD 01  |
| 13                     | 3.5   |     | CPXRF  | 81ROB 02  | 7020                  | 2620  |     | EXRF   | 77NIE 01  |
| 13.1                   | 2.5   |     | SSMS   | 84VOS 01  | <u>Sb (ug/g)</u>      |       |     |        |           |
| 14                     | 1     |     | ITNA   | 84TU 01   | 1.1                   | 0.2   |     | ITNA   | 77ZIK 01  |
| 14                     | 2     |     | ITNA   | 85WAH 01  | 2.2                   | 0.2   |     | HAA    | 74LOO 01  |
| 14.8                   |       |     | CPXRF  | 75CAM 01  | 2.3                   |       | 11  | SSMS   | 85VOS 01  |
| 15.61                  | 3.01  |     | ITNA   | 79REN 03  | 2.3                   | 0.26  |     | RTNA   | 83SIR 01  |
| 19.9                   |       |     | SSMS   | 81VER 02  | 2.3                   | 0.3   | H   | ICPES  | 79ROB 01  |
| 28                     |       |     | EXRF   | 81PAR 01  | 2.5                   |       |     | ITNA   | 78CAP 01  |
| 30                     |       |     | CPAA   | 78MCG 01  | 2.5                   | 3.6   | R   | ITNA   | 79IMA 01  |
| 30                     |       |     | CPXRF  | 76ZEI 01  | 2.5                   | 3.6   | RD  | ITNA   | 79IMA 03  |
| <u>S (ug/g)</u>        |       |     |        |           | 2.55                  |       | 11  | FAA    | 79HOE 02  |
| 1200                   |       |     | CB     | 72JON 03  | 2.55                  |       | 11  | FAA    | 79HOE 02  |
| 1400                   | 200   | 17  | VV     | 72JON 03  | 2.57                  | 0.19  |     | ITNA   | 79REN 03  |
| 1400                   | 600   |     | CPXRF  | 79REN 02  | 2.58                  | 0.47  |     | ITNA   | 85MAD 01  |
| 1660                   | 220   |     | TCGS   | 79AND 01  | 2.62                  |       | 6   | NAA    | 78GAN 01  |
| 1690                   | 5     |     | TITR   | 80SMI 01  | 2.7                   |       |     | ITNA   | 80CRE 01  |
| 1700                   | 200   |     | TCGS   | 79FAI 01  | 2.7                   |       | 1   | IENA   | 79KUC 01  |
| 1760                   | 790   | 7   | NM     | 83LI 01   | 2.7                   |       |     | NAA    | 77LAU 01  |
| 1830                   |       |     | CPXRF  | 84KAU 01  | 2.7                   | 0.1   |     | ITNA   | 78LAU 02  |
| 1850                   | 30    |     | XRF    | 83GUN 01  | 2.7                   | 0.2   | D   | RTNA   | 74GOE 01  |
| 1860                   | 90    |     | ICPES  | 84MOR 01  | 2.7                   | 0.2   |     | RTNA   | 73GOE 01  |
| 1860                   | 180   |     | COLOR  | 82BAR 01  | 2.7                   | 0.2   |     | ITNA   | 85WAH 01  |
| 1890                   | 100   |     | ICPES  | 84PRI 01  | 2.7                   | 0.3   |     | ITNA   | 74RAN 02  |
| 1900                   | 34    |     | CB     | 84HER 01  | 2.7                   | 0.3   | 6   | ITNA   | 74BEC 01  |
| 1920                   | 20    |     | CB     | 84LEC 02  | 2.7                   | 0.4   |     | 14NAA  | 81WIL 02  |
| 1920                   | 90    |     | CB     | 86BOW 01  | 2.7                   | 0.4   | 6   | ITNA   | 74BEC 01  |
| 1943                   | 23    |     | CB     | 86GAU 01  | 2.72                  | 0.01  |     | ITNA   | 79AHM 01  |
| 1950                   | 200   |     | XRF    | 82BAR 01  | 2.72                  | 0.01  |     | ITNA   | 83AHM 01  |
| 1960                   |       | D   | CB     | 85JAC 01  | 2.72                  | 0.2   |     | ITNA   | 82QUR 01  |
| 1960                   | 40    | 6   | CB     | 84JAC 01  | 2.77                  | 0.02  | H   | ICPES  | 81PAH 01  |
| 2000                   | 300   |     | IC     | 83HER 01  | 2.8                   |       |     | HAA    | 80HON 01  |
| 2020                   | 180   |     | CB     | 84GLA 11  | 2.8                   |       |     | ITNA   | 79KUC 01  |
| 2028                   | 21    |     | ICPES  | 85LIE 02  | 2.8                   |       | 1   | IENA   | 79KUC 01  |
| 2040                   |       | D   | CB     | 85JAC 01  | 2.8                   |       | 11  | HAA    | 82KUE 03  |
| 2040                   | 60    | 6   | CB     | 84JAC 01  | 2.8                   |       |     | ITNA   | 85MIS 01  |
| 2120                   |       |     | XRF    | 78CAM 02  | 2.8                   | 0.1   | 7   | RTNA   | 77GIL 03  |
| 2120                   | 50    |     | EXRF   | 77NIE 01  | 2.8                   | 0.1   |     | RTNA   | 78GAL 01  |
| 2140                   | 60    |     | WXRF   | 86BOW 01  | 2.8                   | 0.1   | H   | ICPES  | 82HAH 01  |
| 2150                   | 200   |     | CB     | 77LAN 01  | 2.8                   | 0.1   | 7   | RTNA   | 80GAL 02  |
| 2150                   | 380   |     | EXRF   | 75REU 01  | 2.8                   | 0.2   |     | ITNA   | 81KOS 01  |
| 2200                   | 103   |     | CPXRF  | 80KIR 01  | 2.8                   | 0.2   |     | ICPES  | 83OLI 01  |
| 2200                   | 1100  | 7   | NM     | 83LI 01   | 2.85                  | 0.06  |     | RTNA   | 80SLO 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sb (ug/g) cont.</u> |       |     |        |           | <u>Sc (ng/g)</u> |       |     |        |           |
| 2.86                   | 0.08  |     | RTNA   | 78GIL 01  | 40               |       | 6   | NAA    | 78GAN 01  |
| 2.88                   | 0.05  |     | ITNA   | 80GAL 02  | 40               | 3     | 6   | ITNA   | 74BEC 01  |
| 2.88                   | 0.05  | 7   | RTNA   | 77GIL 03  | 40               | 10    | 6   | NAA    | 78GAN 01  |
| 2.9                    |       | 11  | HAA    | 82CRO 03  | 41               | 4     |     | VV     | 81NON 01  |
| 2.9                    | 0.09  |     | RTNA   | 79HOE 01  | 44               | 3     |     | ITNA   | 74RAN 02  |
| 2.9                    | 0.1   |     | IENA   | 81KOS 01  | 50               | 10    |     | RTNA   | 83SIR 01  |
| 2.9                    | 0.2   |     | ITNA   | 78VAL 01  | 52               | 3     |     | ITNA   | 79CHA 04  |
| 2.9                    | 0.3   |     | ITNA   | 84TU 01   | 54               | 4     |     | RTNA   | 80SLO 01  |
| 2.9                    | 0.5   |     | RTNA   | 79REN 01  | 57               | 6     |     | ITNA   | 81KOS 01  |
| 2.92                   | 0.08  | 7   | RTNA   | 80GAL 02  | 60               | 1     |     | ITNA   | 78LAU 02  |
| 2.92                   | 0.08  | 7   | RTNA   | 77GIL 03  | 62               |       |     | NAA    | 74BEL 01  |
| 2.95                   | 0.25  |     | AA     | 83RAP 01  | 62               | 2     |     | ITNA   | 79KOB 03  |
| 2.99                   | 0.05  |     | HAA    | 76FIO 01  | 62               | 3     |     | ITNA   | 84TU 01   |
| 2.99                   | 0.45  |     | RTNA   | 79ROS 02  | 62               | 4.5   |     | ITNA   | 85MAD 01  |
| 3                      |       |     | RTNA   | 79BYR 01  | 63               | 8     |     | ITNA   | 76KUC 01  |
| 3                      |       |     | RTNA   | 72MOR 03  | 65               |       |     | NAA    | 77LAU 01  |
| 3                      |       | 11  | HAA    | 82KUE 03  | 65               | 3     |     | ITNA   | 75RIC 01  |
| 3                      | 0.1   |     | HAA    | 85YAM 01  | 66               |       |     | ITNA   | 85GAU 04  |
| 3                      | 0.2   |     | FAA    | 80NAK 01  | 66               | 3     |     | ITNA   | 84GLA 11  |
| 3                      | 0.2   | 7   | RTNA   | 80GAL 02  | 66               | 6     |     | ITNA   | 79SAT 01  |
| 3.02                   | 0.26  |     | HAA    | 79VIJ 01  | 67               |       |     | ITNA   | 78CAP 01  |
| 3.1                    |       | 11  | HAA    | 82CRO 03  | 67               | 5     |     | ITNA   | 81HAB 01  |
| 3.1                    | 0.03  |     | VV     | 81NON 01  | 70.1             | 4     |     | ITNA   | 83AHM 01  |
| 3.1                    | 0.1   |     | ITNA   | 79SAT 01  | 73               |       |     | ITNA   | 80CRE 01  |
| 3.1                    | 0.7   |     | ITNA   | 77HAM 01  | 75               | 5     | 5   | ITNA   | 80TOU 01  |
| 3.14                   | 0.13  |     | RTNA   | 72BYR 01  | 75               | 7     |     | ITNA   | 85WAH 01  |
| 3.15                   | 0.26  |     | PAA    | 74CHA 01  | 80               |       |     | ITNA   | 79KUC 01  |
| 3.16                   | 0.26  |     | NAA    | 77JER 01  | 80               | 6     |     | ITNA   | 79REN 03  |
| 3.2                    | 0.2   |     | GCMES  | 75TAL 01  | 81               | 2     |     | ITNA   | 84GIB 01  |
| 3.25                   | 0.3   |     | PAA    | 76KAT 04  | 90               |       |     | ITNA   | 85MIS 01  |
| 3.3                    |       | 11  | HAA    | 82KUE 03  | 90               | 20    |     | ITNA   | 81KUL 01  |
| 3.3                    | 0.14  |     | ITNA   | 79KOB 03  | 110              |       |     | SSMS   | 78JRE 01  |
| 3.3                    | 0.2   | 5   | ITNA   | 80TOU 01  | 170              | 50    |     | RTNA   | 77MEL 01  |
| 3.3                    | 0.2   |     | PAA    | 76KAT 02  | 200              |       |     | RTNA   | 72MOR 03  |
| 3.3                    | 0.3   |     | ITNA   | 81KUL 01  | 220              | 10    |     | PAA    | 74CHA 01  |
| 3.3                    | 0.6   |     | RTNA   | 77KUS 01  |                  |       |     |        |           |
| 3.31                   | 0.15  |     | ITNA   | 84NDI 01  | <u>Se (ng/g)</u> |       |     |        |           |
| 3.5                    |       |     | ICPES  | 85NAR 02  |                  |       |     |        |           |
| 3.5                    |       |     | AF     | 85NAR 02  | 24               | 6.7   |     | FAA    | 81MEY 01  |
| 3.5                    | 0.2   |     | PAA    | 78HIS 01  | 53               |       |     | FLUOR  | 79TAM 01  |
| 3.5                    | 0.3   |     | FAA    | 78HAY 01  | 55               | 9     |     | HAA    | 76FIO 01  |
| 3.78                   | 0.02  |     | ITNA   | 81HAB 01  | 56               | 20    |     | RTNA   | 79ROS 02  |
| 3.8                    | 0.2   |     | RTNA   | 73TJI 01  | 57               | 6.3   |     | ITNA   | 77HAM 01  |
| 3.8                    | 0.6   | 6   | NAA    | 78GAN 01  | 58               | 14    |     | RTNA   | 73TJI 01  |
| 5.1                    | 1.1   |     | 14NAA  | 81WIL 01  | 60               | 20    | D   | RTNA   | 74GOE 01  |
|                        |       |     |        |           | 60               | 20    |     | RTNA   | 73GOE 01  |
|                        |       |     |        |           | 60               | 20    |     | ICPES  | 83OLI 01  |
|                        |       |     |        |           | 64               |       | 7   | ICPES  | 84MIA 01  |
|                        |       |     |        |           | 65               | 14    | 9   | ITNA   | 80WAN 01  |
|                        |       |     |        |           | 68               |       |     | FAA    | 82HEI 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Se (ng/g) cont.</u> |       |     |        |           | <u>Se (ng/g) cont.</u> |       |     |        |           |
| 70                     |       |     | FAA    | 78CAP 01  | 82                     | 20    |     | IENA   | 81KOS 01  |
| 70                     |       | 11  | HAA    | 85PIW 01  | 82                     | 24    |     | HAA    | 76IHN 02  |
| 70                     | 4     |     | ICPES  | 80HAA 01  | 83                     | 4     |     | DCPES  | 81CAR 02  |
| 70                     | 10    | H   | ICPES  | 82HAH 01  | 83                     | 4     |     | GCMES  | 74TAL 02  |
| 70                     | 20    |     | HAA    | 82TAM 01  | 83                     | 4     |     | VV     | 81NON 01  |
| 70                     | 200   | R   | RTNA   | 81GLA 03  | 83                     | 12    | 9   | ITNA   | 77VOB 01  |
| 72                     | 8     |     | FLUOR  | 83KOH 01  | 84                     | 8     |     | RTNA   | 78GIL 01  |
| 74                     |       |     | ITNA   | 81MEY 01  | 85                     | 4     |     | ITNA   | 79SAT 01  |
| 74                     |       |     | ITNA   | 81HAN 01  | 86                     | 10    |     | ITNA   | 78GIL 01  |
| 75                     | 5     | 7   | RTNA   | 80GAL 02  | 87                     |       | 17  | FLUOR  | 74AND 01  |
| 75                     | 5     | 7   | RTNA   | 77GIL 03  | 87                     | 3     | 6   | FLUOR  | 75OLS 01  |
| 75                     | 20    |     | AA     | 83RAP 01  | 87                     | 3     |     | FLUOR  | 74LEI 01  |
| 76                     | 1.3   |     | HAA    | 81HAM 01  | 87                     | 7     |     | HAA    | 75SIE 01  |
| 76                     | 3     | 11  | GC     | 81UCH 02  | 87                     | 10    | 7   | RTNA   | 77GIL 03  |
| 76                     | 10    |     | ITNA   | 79AHM 01  | 87                     | 10    | 7   | RTNA   | 80GAL 02  |
| 77                     |       | 17  | FLUOR  | 74AND 01  | 88                     | 7     |     | RTNA   | 73HEY 01  |
| 77                     | 2     | 11  | GC     | 81UCH 02  | 88                     | 11    |     | FLUOR  | 74IHN 02  |
| 77                     | 5     |     | FLUOR  | 76CHA 02  | 88                     | 16    |     | ASV    | 76AND 01  |
| 77                     | 6     |     | FAA    | 79VOB 01  | 89                     | 3     | 6   | FLUOR  | 75OLS 01  |
| 78                     |       |     | HAA    | 77IHN 01  | 89                     | 17    |     | ITNA   | 77VOB 01  |
| 78                     |       | 7   | ICPES  | 84MIA 01  | 90                     |       |     | HAA    | 80HON 01  |
| 78                     | 4     |     | ASV    | 84ADE 01  | 90                     |       | 11  | HAA    | 85PIW 01  |
| 78                     | 4     |     | RTNA   | 78COO 01  | 90                     | 4     |     | HAA    | 85YAM 01  |
| 78                     | 4     |     | ITNA   | 77GUI 02  | 90                     | 10    | 7   | RTNA   | 80GAL 02  |
| 78                     | 5     |     | GC     | 77POO 01  | 90                     | 10    | 7   | RTNA   | 77GIL 03  |
| 78                     | 7     | 34  | HAA    | 78FLA 01  | 90                     | 10    |     | RTNA   | 77BAN 03  |
| 78                     | 7.2   |     | HAA    | 81MEY 01  | 90                     | 10    |     | RTNA   | 78GAL 01  |
| 78                     | 10    |     | ITNA   | 83AHM 01  | 90                     | 10    |     | ITNA   | 82QUR 01  |
| 78                     | 10    |     | ITNA   | 85WAH 01  | 90                     | 20    |     | ITNA   | 79PAV 02  |
| 78                     | 11    |     | RTNA   | 82POL 01  | 90                     | 30    |     | ITNA   | 78LAU 02  |
| 79                     | 12    |     | RTNA   | 77ROO 02  | 100                    |       |     | ITNA   | 80CRE 01  |
| 79                     | 12    |     | RTNA   | 72ROO 03  | 100                    |       |     | ITNA   | 79VOB 01  |
| 79.8                   | 8     |     | NAA    | 76GUZ 01  | 100                    | 20    | 7   | RTNA   | 80GAL 02  |
| 80                     |       | 17  | FLUOR  | 74AND 01  | 100                    | 20    | 9   | ITNA   | 78LAU 02  |
| 80                     |       |     | NAA    | 78GAN 01  | 100                    | 20    | 6   | ITNA   | 74BEC 01  |
| 80                     |       |     | RTNA   | 72MOR 03  | 100                    | 40    |     | NAA    | 74LEI 01  |
| 80                     |       | 7   | ICPES  | 84MIA 01  | 110                    | 20    |     | RTNA   | 80SLO 01  |
| 80                     | 1     |     | FAA    | 80NEV 01  | 110                    | 30    |     | AA     | 79PAV 02  |
| 80                     | 4     |     | FLUOR  | 80KOH 01  | 118                    | 79    |     | HAA    | 77IHN 03  |
| 80                     | 10    |     | RTNA   | 80KNA 01  | 130                    | 40    |     | RTNA   | 77MEL 01  |
| 80                     | 10    | 9   | ITNA   | 79VOB 01  | 140                    | 20    |     | ITNA   | 74RAN 02  |
| 80                     | 10    | 9   | ITNA   | 79PAV 02  | 140                    | 90    |     | RTNA   | 83SIR 01  |
| 80                     | 10    |     | RTNA   | 75ABU 01  | 160                    |       |     | ICPES  | 84MAR 01  |
| 80                     | 10    |     | RTNA   | 74ORV 01  | 200                    |       |     | ITNA   | 78CAP 01  |
| 80                     | 10    |     | ITNA   | 84GIB 01  | 1100                   | 170   |     | HAA    | 74CHU 01  |
| 80                     | 20    |     | HAA    | 80AGE 02  |                        |       |     |        |           |
| 80                     | 20    |     | SSMS   | 77ROO 02  |                        |       |     |        |           |
| 80                     | 30    |     | ITNA   | 81KOS 01  |                        |       |     |        |           |
| 80.4                   | 4.6   |     | RTNA   | 78GOF 03  |                        |       |     |        |           |
| 81                     | 9     |     | HAA    | 83KOL 01  |                        |       |     |        |           |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Si (ug/g)</u> |       |     |        |           | <u>Sn (ng/g)</u> |       |     |        |           |
| 475.8            | 12.29 |     | NAA    | 76GUZ 01  | 180              | 10    | H   | ICPES  | 82HAH 01  |
| 475.8            | 12.3  |     | ITNA   | 75PIE 01  | 230              |       | 11  | SSMS   | 85VOS 01  |
| 480              | 14    |     | CPXRF  | 80KIR 01  | 284              | 4     | 5   | RTNA   | 74BYR 01  |
| 500              | 200   |     | 14NAA  | 80FAA 01  | 290              | 25    |     | RTNA   | 77BYR 01  |
| 600              |       |     | VV     | 81NON 01  | 304              | 15    | 5   | RTNA   | 74BYR 01  |
| 750              |       |     | NAA    | 78GAN 01  | 340              | 90    |     | ICPES  | 80HAA 01  |
| 1000             | 160   |     | 14NAA  | 77SEG 01  | 375              | 25    |     | COLOR  | 82OMA 01  |
| 2080             |       |     | CPXRF  | 84KAU 01  | 1750             |       |     | AF     | 85NAR 02  |
| 2340             | 60    |     | IENA   | 79JON 01  | 4100             |       |     | RTNA   | 72BOW 01  |
| 2400             |       | 11  | SSMS   | 85VOS 01  |                  |       |     |        |           |
| <u>Sm (ng/g)</u> |       |     |        |           | <u>Sr (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 14.5             | 2.5   |     | FAA    | 77FUJ 01  |
| 16               | 3     |     | IENA   | 81KOS 01  | 18.1             |       |     | SSMS   | 81VER 02  |
| 19               | 4     |     | ITNA   | 81KOS 01  | 23               |       |     | OES    | 75JON 03  |
| 88               | 8     | 5   | ITNA   | 80TOU 01  | 26               | 2     |     | EXRF   | 85COE 02  |
| 90               |       |     | SSMS   | 78URE 01  | 28               | 0.6   |     | PAA    | 78HIS 01  |
| 90               | 140   | R   | ITNA   | 79IMA 01  | 28               | 28.3  | R   | AA     | 75MAN 01  |
| 92               | 2     |     | RTNA   | 86TSU 01  | 29.7             |       |     | CPXRF  | 84KAU 01  |
| 100              |       |     | ITNA   | 79KUC 01  | 30               | 6     |     | SSMS   | 84VOS 01  |
| 100              |       |     | RTNA   | 77LAU 02  | 30.4             |       | 6   | ICPES  | 83BRA 02  |
| 100              |       | 1   | IENA   | 79KUC 01  | 31               |       | 11  | SSMS   | 85VOS 01  |
| 100              |       | D   | RTNA   | 82LAU 01  | 31               | 3.3   |     | CPXRF  | 80KIR 01  |
| 100              |       |     | NAA    | 77LAU 01  | 31.3             | 4.1   |     | XRF    | 77SMI 04  |
| 100              | 30    |     | ITNA   | 77NAD 02  | 31.7             | 4.8   |     | 14NAA  | 77VAN 01  |
| 105              | 4     |     | RTNA   | 80SLO 01  | 33               |       | 11  | SSMS   | 85VOS 01  |
| 110              |       |     | ITNA   | 80CRE 01  | 33               | 4     |     | SSMS   | 84VOS 01  |
| 110              | 10    |     | ITNA   | 78LAU 02  | 33               | 6     |     | SSMS   | 84VOS 01  |
| 110              | 10    |     | RTNA   | 83SIR 01  | 33.1             |       |     | EXRF   | 81BIS 01  |
| 110              | 30    |     | TCGS   | 79FAI 01  | 33.6             |       | 6   | ICPES  | 83BRA 02  |
| 113              | 7     |     | RTNA   | 83TJI 01  | 34               | 1     |     | FAA    | 82SUZ 03  |
| 114              | 1     |     | RTNA   | 84ODD 01  | 34.3             | 0.5   |     | EXRF   | 73SPA 01  |
| 130              | 40    |     | ITNA   | 77HAM 01  | 35               |       |     | OES    | 75JON 04  |
| 140              |       | 1   | IENA   | 79KUC 01  | 35               |       |     | NAA    | 77LAU 01  |
| 140              |       |     | RTNA   | 72MOR 03  | 35               | 2     |     | EXRF   | 80DYC 01  |
| 140              | 40    |     | ITNA   | 74RAN 02  | 35               | 3     | 9   | ITNA   | 78LAU 02  |
| 150              | 20    |     | VV     | 81NON 01  | 35               | 3     |     | ICPES  | 79ABE 01  |
| 150              | 33    |     | ITNA   | 85MAD 01  | 35               | 5     |     | SSMS   | 84VOS 01  |
| 170              | 30    |     | TCGS   | 79AND 01  | 35.2             |       |     | ICPES  | 78DAH 01  |
| 320              | 120   |     | ITNA   | 79REN 03  | 35.2             | 4.9   |     | ITNA   | 84TU 01   |
|                  |       |     |        |           | 36               |       | 6   | ICPMS  | 83DOU 01  |
|                  |       |     |        |           | 36               |       |     | CPXRF  | 76ZEI 01  |
|                  |       |     |        |           | 36               |       |     | CPAA   | 78MCG 01  |
|                  |       |     |        |           | 36               | 1     |     | ICPES  | 85LIE 02  |
|                  |       |     |        |           | 36               | 6     |     | ITNA   | 78LAU 02  |
|                  |       |     |        |           | 36.2             | 2     |     | PAA    | 74CHA 01  |
|                  |       |     |        |           | 36.3             | 1.3   |     | EXRF   | 79GIA 01  |
|                  |       |     |        |           | 36.3             | 1.8   |     | CPXRF  | 85CLA 01  |
|                  |       |     |        |           | 36.5             | 0.3   |     | ICPES  | 79HER 01  |
|                  |       |     |        |           | 36.5             | 1     |     | PAA    | 76KAT 04  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sr (ug/g) cont.</u> |       |     |        |           | <u>Te (ng/g)</u> |       |     |        |           |
| 36.5                   | 2     |     | EXRF   | 77FLO 01  | 10               | 3     |     | HAA    | 85YAM 01  |
| 36.5                   | 4     |     | EXRF   | 75REU 01  | 11               | 3     | 35  | RTNA   | 75GLA 01  |
| 36.6                   | 1.2   |     | EXRF   | 73GIA 01  | <u>Th (ng/g)</u> |       |     |        |           |
| 36.7                   | 6     |     | XRF    | 78STA 02  | 6.6              | 0.3   |     | IENA   | 81KOS 01  |
| 37                     | 1     |     | ITNA   | 79SAT 01  | 6.8              | 0.4   |     | ITNA   | 81KOS 01  |
| 37                     | 1     |     | PAA    | 76KAT 02  | 40               | 10    |     | RTNA   | 83SIR 01  |
| 37                     | 1     |     | ICPES  | 79MCQ 02  | 44               |       |     | ITNA   | 79KUC 01  |
| 37                     | 2     |     | ICPES  | 79MCQ 01  | 44               |       | 1   | IENA   | 79KUC 01  |
| 37.2                   | 0.2   |     | IENA   | 81KOS 01  | 50               | 10    |     | RTNA   | 80SLO 01  |
| 37.4                   | 8.3   |     | CPXRF  | 81ROB 02  | 52               | 4     |     | ITNA   | 78LAU 02  |
| 37.8                   |       | 6   | ICPES  | 83BRA 02  | 59               | 13    |     | ITNA   | 81KUL 01  |
| 37.8                   | 0.1   |     | IENA   | 85GAU 04  | 59               | 20    |     | ITNA   | 74RAN 02  |
| 38                     | 5     |     | NAA    | 78GAN 01  | 60               |       |     | ITNA   | 80CRE 01  |
| 38.7                   | 1.5   |     | ITNA   | 81KOS 01  | 60               |       |     | NAA    | 77LAU 01  |
| 39                     | 2     |     | 14NAA  | 81WIL 02  | 60               |       |     | ITNA   | 85MAD 01  |
| 39                     | 3     |     | ICPES  | 84SOB 01  | 63               | 23    |     | ITNA   | 85MAD 01  |
| 40                     |       |     | RTNA   | 72MOR 03  | 69               |       | 1   | IENA   | 79KUC 01  |
| 41                     | 3     |     | RTNA   | 77KUS 01  | 69.8             | 8.1   |     | RTNA   | 85JAI 01  |
| 42.2                   | 4.2   |     | XRF    | 74REU 01  | 85               |       |     | ITNA   | 85MIS 01  |
| 44.2                   | 2.85  |     | NAA    | 76GUZ 01  | 90               | 50    |     | VV     | 81NON 01  |
| 45                     |       |     | OES    | 75JON 01  | <u>Ti (ug/g)</u> |       |     |        |           |
| 45                     |       |     | EXRF   | 81OHT 01  | 2.4              | 0.4   |     | CPAA   | 77ZIK 01  |
| 45                     | 2     |     | ITNA   | 74RAN 02  | 6.6              | 0.5   |     | ICPES  | 79ABE 01  |
| 45                     | 15    |     | CPAA   | 77ZIK 01  | 7.6              |       |     | ICPES  | 78CAP 01  |
| 53                     | 4     |     | 14NAA  | 81WIL 01  | 10.5             | 0.8   |     | ICPES  | 85LIE 02  |
| 118                    |       |     | EXRF   | 81PAR 01  | 14.2             |       |     | SSMS   | 81VER 02  |
| 160                    |       | 6   | ICPMS  | 83DOU 01  | 17.2             | 0.3   |     | COLOR  | 82KIR 02  |
| <u>Ta (ng/g)</u>       |       |     |        |           | 17.7             | 2     |     | SSMS   | 84VOS 01  |
| 5                      |       |     | NAA    | 77LAU 01  | 18               | 8.5   |     | EXRF   | 79GIA 01  |
| 7                      | 2     |     | ITNA   | 78LAU 02  | 19.1             |       | 11  | SSMS   | 85VOS 01  |
| 10                     |       |     | ITNA   | 80CRE 01  | 19.3             |       | 11  | SSMS   | 85VOS 01  |
| 10                     | 3     |     | ITNA   | 74RAN 02  | 21.9             | 3     |     | CPXRF  | 85CLA 01  |
| <u>Tb (ng/g)</u>       |       |     |        |           | 22               | 2     |     | SSMS   | 84VOS 01  |
| 1.23                   | 0.12  |     | ITNA   | 77NAD 02  | 22               | 3     |     | SSMS   | 84VOS 01  |
| 9                      | 1     |     | RTNA   | 80SLO 01  | 23               | 2.3   |     | SSMS   | 84VOS 01  |
| 9                      | 2     |     | RTNA   | 86TSU 01  | 24               | 5     |     | FAA    | 86GAU 01  |
| 10                     | 7     |     | RTNA   | 83SIR 01  | 26               |       |     | SSMS   | 78URE 01  |
| 12                     | 2     |     | ITNA   | 78LAU 02  | 26               | 3     |     | 14NAA  | 81WIL 01  |
| 13                     |       | D   | RTNA   | 82LAU 01  | 28.6             |       |     | CPXRF  | 84KAU 01  |
| 13                     |       |     | RTNA   | 77LAU 02  | 30               | 4     |     | 14NAA  | 81WIL 02  |
| 14                     |       |     | ITNA   | 80CRE 01  | 40               |       |     | ITNA   | 78LAU 02  |
| 15                     |       |     | NAA    | 77LAU 01  | 60               |       |     | NAA    | 77LAU 01  |
| 15                     | 2     |     | RTNA   | 83TJI 01  | 96               | 12    |     | PAA    | 78HIS 01  |
| 18                     | 1     |     | ITNA   | 74RAN 02  | 191              | 33    |     | ITNA   | 81HAB 01  |
| 72                     | 6     |     | RTNA   | 84ODD 01  |                  |       |     |        |           |
| 80                     |       |     | SSMS   | 78URE 01  |                  |       |     |        |           |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc            | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|-----------------|-------|-----|--------|-----------|
| <u>Tl (ng/g)</u> |       |     |        |           | <u>V (ng/g)</u> |       |     |        |           |
| 32               |       | 11  | ASV    | 84LIE 01  | 140             | 30    | 6   | ITNA   | 74HOF 01  |
| 34               |       | 11  | ASV    | 84LIE 01  | 248             | 10    | 11  | RTNA   | 82HEY 02  |
| 36               |       | 11  | FAA    | 84LIE 01  | 300             |       | 35  | ITNA   | 81GLA 03  |
| 40               | 20    |     | FAA    | 77BRU 01  | 340             | 20    | 11  | RTNA   | 72LEV 01  |
| 74               |       |     | FAA    | 82HEI 01  | 361             | 90    |     | UU     | 75WEL 02  |
| 200              | 40    |     | PAA    | 80SEG 01  | 370             | 11    |     | FAA    | 77MYR 01  |
| 300              | 100   |     | PAA    | 78HIS 01  | 377             | 10    |     | RTNA   | 80HEY 01  |
|                  |       |     |        |           | 390             | 980   | RD  | ITNA   | 79IMA 03  |
|                  |       |     |        |           | 390             | 980   | R   | ITNA   | 79IMA 01  |
|                  |       |     |        |           | 400             | 100   |     | ITNA   | 77ZIK 01  |
|                  |       |     |        |           | 401             | 16    |     | RTNA   | 79COR 01  |
| <                | 10    |     | RTNA   | 77LAU 02  | 401             | 16    |     | RTNA   | 81COR 02  |
| <                | 10    | D   | RTNA   | 82LAU 01  | 408             | 16    |     | RTNA   | 80HEY 01  |
| 3.72             | 0.23  |     | ITNA   | 77NAD 02  | 408             | 16    | 11  | RTNA   | 82HEY 02  |
| 7                | 5.5   |     | RTNA   | 84ODD 01  | 409             | 41    |     | RTNA   | 72DAM 01  |
| 10               |       |     | SSMS   | 78URE 01  | 410             | 15    |     | RTNA   | 80HEY 01  |
|                  |       |     |        |           | 410             | 15    | 11  | RTNA   | 82HEY 02  |
|                  |       |     |        |           | 435             | 20    |     | RTNA   | 80HEY 01  |
|                  |       |     |        |           | 440             | 40    |     | RTNA   | 79BLO 01  |
|                  |       |     |        |           | 440             | 200   |     | ICPES  | 85LIE 02  |
|                  |       |     |        |           | 471             | 14    | 11  | RTNA   | 78BYR 01  |
|                  |       |     |        |           | 480             | 28    |     | COLOR  | 82KIR 01  |
|                  |       |     |        |           | 500             | 150   |     | RTNA   | 77GUI 03  |
|                  |       |     |        |           | 530             | 50    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 535             |       |     | NAA    | 80KOS 02  |
|                  |       |     |        |           | 535             | 30    | 11  | RTNA   | 78BYR 01  |
|                  |       |     |        |           | 540             | 20    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 570             | 110   |     | ITNA   | 81HAB 01  |
|                  |       |     |        |           | 570             | 140   | 6   | ITNA   | 74HOF 01  |
|                  |       |     |        |           | 580             |       |     | ITNA   | 76BAT 01  |
|                  |       |     |        |           | 580             | 70    |     | ITNA   | 75RIC 01  |
|                  |       |     |        |           | 580             | 130   |     | ITNA   | 77HAM 01  |
|                  |       |     |        |           | 598             | 32    |     | ITNA   | 80HEY 01  |
|                  |       |     |        |           | 600             | 20    |     | RTNA   | 79BLO 01  |
|                  |       |     |        |           | 600             | 200   |     | ITNA   | 78LAU 02  |
|                  |       |     |        |           | 610             | 23    |     | ITNA   | 73PIE 01  |
|                  |       |     |        |           | 622             | 23    | 11  | RTNA   | 72LEV 01  |
|                  |       |     |        |           | 640             | 310   |     | UU     | 75GUI 01  |
|                  |       |     |        |           | 643             | 129   |     | RTNA   | 76GUI 01  |
|                  |       |     |        |           | 660             |       | 11  | SSMS   | 85VOS 01  |
|                  |       |     |        |           | 680             |       | 11  | SSMS   | 85VOS 01  |
|                  |       |     |        |           | 700             | 100   |     | ITNA   | 79KOB 03  |
|                  |       |     |        |           | 750             | 110   |     | VV     | 81NON 01  |
|                  |       |     |        |           | 800             |       |     | ITNA   | 78CAP 01  |
|                  |       |     |        |           | 900             | 20    |     | ITNA   | 76GAL 01  |
|                  |       |     |        |           | 2200            | 100   |     | ICPES  | 79ABE 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>W (ng/g)</u>  |       |     |        |           | <u>Zn (ug/g) cont.</u> |       |     |        |           |
| <                | 2000  | L   | RTNA   | 72MOR 03  | 22                     |       |     | AA     | 83ELA 01  |
| 16               | 4     |     | RTNA   | 80SLO 01  | 22                     | 1     |     | EXRF   | 80DYC 01  |
| 20               | 7     |     | RTNA   | 77KUS 01  | 22                     | 3.1   |     | CPXRF  | 80KIR 01  |
| 50               | 10    |     | RTNA   | 83SIR 01  | 22.5                   | 0.8   |     | AA     | 76GAL 01  |
| <u>Y (ng/g)</u>  |       |     |        |           | 23                     |       |     | AA     | 73LOO 03  |
| <                | 1000  | L   | EXRF   | 79GIA 01  | 23                     |       |     | AA     | 84SAT 02  |
| <                | 1100  | L   | 14NAA  | 81WIL 01  | 23                     |       |     | AE+AF  | 79ULL 01  |
| <                | 1100  | L   | 14NAA  | 81WIL 02  | 23                     |       |     | OES    | 75JON 02  |
| 480              |       |     | SSMS   | 78URE 01  | 23                     |       | 11  | EXRF   | 81BIS 01  |
| <u>Yb (ng/g)</u> |       |     |        |           | 23                     |       |     | ITNA   | 78CAP 01  |
| 11               |       |     | RTNA   | 80SLO 01  | 23                     |       |     | SSMS   | 85VOS 01  |
| 20               |       |     | SSMS   | 78URE 01  | 23                     | 1     |     | RTNA   | 76MEL 03  |
| 20               | 2     |     | RTNA   | 86TSU 01  | 23                     | 1     |     | RTNA   | 77MEL 01  |
| 20               | 20    |     | RTNA   | 83SIR 01  | 23                     | 1.5   |     | EXRF   | 85COE 02  |
| 21               | 1     |     | ITNA   | 77NAD 02  | 23                     | 2     | 7   | RTNA   | 80GAL 02  |
| 21               | 2     |     | RTNA   | 83TJI 01  | 23                     | 2.1   |     | XRF    | 78LIN 01  |
| 25               |       |     | RTNA   | 77LAU 02  | 23                     | 5     |     | SSMS   | 84VOS 01  |
| 25               |       | D   | RTNA   | 82LAU 01  | 23.1                   |       |     | ICPES  | 78CAP 01  |
| 27               | 5     |     | RTNA   | 84ODD 01  | 23.1                   | 0.8   |     | RTNA   | 83DAN 01  |
| 29               | 3     |     | ITNA   | 81KOS 01  | 23.2                   | 2.2   |     | AA     | 77BRU 01  |
| 31               | 1     |     | IENA   | 81KOS 01  | 23.3                   | 2.7   |     | RTNA   | 74RAV 01  |
| 34               | 3     |     | ITNA   | 85WAH 01  | 23.4                   | 1.4   | 11  | ASV    | 84LOC 01  |
| 40               |       |     | NAA    | 77LAU 01  | 23.5                   | 0.9   | 11  | ICPES  | 82JON 01  |
| <u>Zn (ug/g)</u> |       |     |        |           | 23.5                   | 1.8   |     | AA     | 73THO 01  |
| 12               |       |     | EXRF   | 82KEE 01  | 23.5                   | 0.8   |     | EXRF   | 73GIA 01  |
| 13               |       |     | OES    | 75BOL 02  | 23.7                   | 0.8   |     | ITNA   | 82AKA 01  |
| 15               | 3     |     | CPXRF  | 77CAM 01  | 23.75                  |       |     | ASV    | 84LOC 01  |
| 17               |       |     | AA     | 76KRI 03  | 23.9                   | 1.5   |     | PAA    | 80YAM 01  |
| 17.1             | 2     |     | EXRF   | 77FLO 01  | 23.9                   | 3.2   |     | FAA    | 73SEG 01  |
| 18               |       |     | OES    | 75JON 09  | 24                     |       |     | AA     | 81ARA 01  |
| 18               | 1     |     | ICPES  | 85LIE 02  | 24                     |       |     | FAA    | 83ATS 01  |
| 19               |       |     | FAA    | 83ATS 01  | 24                     |       | 6   | ICPES  | 83CHA 01  |
| 19               | 4     |     | ICPES  | 79HER 01  | 24                     | 0.4   |     | AA     | 77FRY 01  |
| 19.8             |       | 6   | ICPES  | 83BRA 02  | 24                     | 1     | 7   | VV     | 81NON 01  |
| 20               | 3     |     | ITNA   | 81KUL 01  | 24                     | 1     |     | RTNA   | 84FAR 02  |
| 20               | 4     |     | ICPES  | 82AZI 02  | 24                     | 1     | 7   | RTNA   | 74ORV 01  |
| 20               | 6     |     | CPAA   | 77ZIK 01  | 24                     | 1     | 11  | AA     | 84FAR 02  |
| 20.3             |       | 11  | SSMS   | 85VOS 01  | 24                     | 1     |     | AA     | 78GAI 01  |
| 21               | 1     |     | ICPES  | 79ABE 01  | 24                     | 1     |     | AA     | 84GLA 02  |
| 21               | 2     |     | ITNA   | 75RIC 01  | 24                     | 1.5   |     | FAA    | 84ROS 01  |
| 21               | 7     |     | SSMS   | 84VOS 01  | 24                     | 2     | 11  | AA     | 78GAI 01  |
| 21.5             | 1.8   |     | ICPES  | 82AZI 01  | 24                     | 2     | 7   | RTNA   | 84FAR 02  |
| 21.7             | 2.8   |     | ITNA   | 81HAB 01  | 24                     | 2     |     | ITNA   | 85WAH 01  |
| 22               |       |     | ITNA   | 79KUC 01  | 24                     | 3     |     | AA     | 77YAN 01  |
|                  |       |     |        |           | 24                     | 28    | R   | AA     | 75MAN 01  |
|                  |       |     |        |           | 24.2                   | 1.5   |     | NAA    | 77JER 01  |
|                  |       |     |        |           | 24.2                   | 1.5   |     | PAA    | 74CHA 01  |
|                  |       |     |        |           | 24.2                   | 2     |     | AA     | 83RAP 01  |
|                  |       |     |        |           | 24.3                   | 0.3   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 24.4                   | 0.9   |     | CPXRF  | 85CLA 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g) cont.</u> |       |     |        |           | <u>Zn (ug/g) cont.</u> |       |     |        |           |
| 24.5                   |       |     | CPXRF  | 84KAU 01  | 26                     | 1     |     | ICPES  | 79MCQ 02  |
| 24.5                   |       |     | XRF    | 78CAM 02  | 26                     | 1     |     | ICPES  | 79MCQ 01  |
| 24.5                   | 0.6   |     | RTNA   | 80SLO 01  | 26                     | 1.3   | 11  | AA     | 75ISA 01  |
| 24.5                   | 0.8   |     | RTNA   | 83SIR 01  | 26                     | 2     | 11  | ICPES  | 82JON 01  |
| 24.5                   | 3     |     | EXRF   | 77NIE 01  | 26                     | 2.1   |     | AA     | 78LIN 01  |
| 24.6                   |       |     | RTNA   | 79BYR 01  | 26                     | 3     |     | ICPES  | 80SCH 05  |
| 24.6                   | 0.9   |     | SSMS   | 72MAG 01  | 26                     | 3     | D   | ICPES  | 80SCH 08  |
| 24.6                   | 2.2   | 11  | ICPES  | 81MUN 01  | 26                     | 3     |     | RTNA   | 74CAR 03  |
| 24.7                   |       |     | AA     | 83FAG 01  | 26                     | 3     |     | EXRF   | 79KUE 01  |
| 24.7                   | 1.5   |     | ITNA   | 84TU 01   | 26                     | 3.4   |     | ITNA   | 77HAM 01  |
| 24.7                   | 2.2   | 6   | EXRF   | 79MAT 01  | 26                     | 4     |     | ITNA   | 76KUC 01  |
| 24.8                   | 1.1   |     | ITNA   | 78GIL 01  | 26                     | 4     |     | ICPES  | 84ABD 01  |
| 24.8                   | 1.9   |     | ITNA   | 79SAT 01  | 26                     | 5     |     | AA     | 75ABU 01  |
| 25                     |       |     | ITNA   | 80CRE 01  | 26                     | 14    |     | AA     | 82HAR 01  |
| 25                     |       |     | ITNA   | 80SAT 01  | 26.1                   | 2.2   |     | ITNA   | 82COR 01  |
| 25                     |       |     | OES    | 75JON 03  | 26.3                   | 5     |     | XRF    | 78STA 02  |
| 25                     |       |     | RTNA   | 72MOR 03  | 26.4                   | 1.8   |     | ICPES  | 83SCH 04  |
| 25                     |       | 6   | ICPES  | 83CHA 01  | 26.7                   | 4.6   | 6   | ITNA   | 74BEC 01  |
| 25                     |       |     | ICPES  | 81WEI 01  | 26.8                   | 1.2   |     | ITNA   | 81KOS 01  |
| 25                     | 1     |     | ICPES  | 84SOB 01  | 26.9                   | 1.1   | 11  | ASV    | 84LOC 01  |
| 25                     | 1     | 11  | ICPES  | 82JON 01  | 26.9                   | 1.2   |     | RTNA   | 73TJI 01  |
| 25                     | 1     | 6   | ICPES  | 85ABD 01  | 27                     |       | 6   | ICPES  | 85ABD 01  |
| 25                     | 1     | 11  | ICPES  | 82JON 01  | 27                     |       |     | OES    | 75JON 06  |
| 25                     | 1     |     | AA     | 78RIT 01  | 27                     |       |     | AA     | 79HIL 01  |
| 25                     | 1.6   |     | EXRF   | 73SPA 01  | 27                     |       | 1   | AA     | 77FRY 01  |
| 25                     | 2     | 9   | ITNA   | 78LAU 02  | 27                     |       |     | ICPES  | 78DAH 01  |
| 25                     | 3     |     | FAA    | 82JEN 02  | 27                     |       |     | NAA    | 77LAU 01  |
| 25                     | 3     |     | ITNA   | 78LAU 02  | 27                     | 1     | 11  | ICPES  | 82JON 01  |
| 25                     | 4     |     | SSMS   | 84VOS 01  | 27                     | 2     |     | RTNA   | 77KUS 01  |
| 25.07                  | 0.76  |     | NAA    | 76GUZ 01  | 27                     | 2     |     | RTNA   | 73GOE 01  |
| 25.1                   | 0.7   |     | AF     | 75EPS 01  | 27                     | 2     | D   | RTNA   | 74GOE 01  |
| 25.1                   | 0.8   |     | AA     | 75EPS 01  | 27                     | 2     |     | ITNA   | 83AHM 01  |
| 25.3                   |       |     | SSMS   | 81VER 02  | 27                     | 2     |     | FAA    | 74TAL 01  |
| 25.3                   | 0.5   |     | AA     | 80AGE 01  | 27                     | 2     | 7   | AA     | 73TAL 01  |
| 25.3                   | 2.1   |     | EXRF   | 79GIA 01  | 27                     | 3     |     | PAA    | 76KAT 02  |
| 25.3                   | 2.5   | 6   | EXRF   | 79MAT 01  | 27                     | 4     |     | PAA    | 76KAT 04  |
| 25.5                   |       | 11  | AA     | 79HOE 02  | 27                     | 5     |     | SSMS   | 84VOS 01  |
| 25.5                   |       | 6   | ICPES  | 83BRA 02  | 27                     | 7     |     | ITNA   | 77ZIK 01  |
| 25.5                   | 1.1   | 6   | ITNA   | 74BEC 01  | 27.2                   | 2.4   |     | ITNA   | 74RAN 02  |
| 25.6                   | 3.4   |     | EXRF   | 75REU 01  | 27.3                   |       |     | ICPES  | 85NAR 02  |
| 25.6                   | 7.64  |     | AA     | 79MON 01  | 27.3                   | 2.1   |     | ITNA   | 82QUR 01  |
| 25.9                   |       |     | FAA    | 78CAP 01  | 27.3                   | 2.1   |     | ITNA   | 79AHM 01  |
| 26                     |       |     | OES    | 75JON 10  | 27.4                   | 2.7   |     | XRF    | 74REU 01  |
| 26                     |       |     | OES    | 75JON 11  | 27.5                   |       | 11  | AA     | 79HOE 02  |
| 26                     |       |     | OES    | 75JON 05  | 27.6                   | 1.3   |     | CPXRF  | 81ROB 02  |
| 26                     |       |     | NAA    | 74BEL 01  | 28                     |       |     | OES    | 75ISA 01  |
| 26                     |       | 6   | AF     | 84NAR 02  | 28                     |       |     | ITNA   | 85MIS 01  |
| 26                     |       | 6   | AF     | 84NAR 02  | 28                     | 1     | D   | DCPES  | 81REE 01  |
| 26                     | 1     | 11  | ICPES  | 82JON 01  | 28                     | 1     |     | DCPES  | 79REE 01  |
| 26                     | 1     | 11  | ICPES  | 82JON 01  | 28                     | 3     |     | FAE    | 74TAL 01  |

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g) cont.</u> |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
| 28                     | 3     | 7   | AE+AF  | 73TAL 01  | <                | 3     | L   | EXRF   | 79GIA 01  |
| 28                     | 5     |     | FAA    | 77LOR 01  | <                | 5     | L   | 14NAA  | 81WIL 01  |
| 28.1                   |       |     | CPXRF  | 75CAM 01  | 0.4              |       | 11  | SSMS   | 85VOS 01  |
| 28.3                   | 0.8   |     | ITNA   | 79KOB 03  | 1.3              | 0.3   |     | PAA    | 78HIS 01  |
| 28.3                   | 2.6   | 6   | POL    | 72SIN 01  | 1.6              | 0.2   | 9   | ITNA   | 78LAU 02  |
| 28.5                   |       | 6   | ICPES  | 83BRA 02  | 1.7              | 0.44  |     | PAA    | 84SAT 01  |
| 28.5                   | 0.8   |     | ICPES  | 81KNA 01  | 2.1              |       |     | NAA    | 77LAU 01  |
| 28.6                   | 2.5   | 11  | ICPES  | 81MUN 01  | 3                | 1     |     | 14NAA  | 81WIL 02  |
| 28.7                   |       |     | AF     | 85NAR 02  | 3.8              |       |     | CPAA   | 77ZIK 01  |
| 29                     | 0.87  | 11  | AA     | 75ISA 01  | 210              | 20    |     | PAA    | 74CHA 01  |
| 29                     | 1     |     | FAA    | 79KRA 01  |                  |       |     |        |           |
| 29                     | 2     |     | ITNA   | 74GUI 01  |                  |       |     |        |           |
| 29                     | 5     |     | NAA    | 78GAN 01  |                  |       |     |        |           |
| 29                     | 32    | RD  | ITNA   | 79IMA 03  |                  |       |     |        |           |
| 29                     | 32    | R   | ITNA   | 79IMA 01  |                  |       |     |        |           |
| 29.1                   | 3.7   |     | ICPES  | 85LYO 01  |                  |       |     |        |           |
| 29.3                   | 2.5   |     | PAA    | 76WIL 01  |                  |       |     |        |           |
| 29.5                   |       | 6   | AA     | 72SIN 01  |                  |       |     |        |           |
| 29.6                   |       | 16  | AA     | 79ABO 01  |                  |       |     |        |           |
| 29.6                   |       | 16  | AA     | 79ABO 01  |                  |       |     |        |           |
| 29.63                  | 1.8   |     | ITNA   | 79REN 03  |                  |       |     |        |           |
| 29.8                   |       | 6   | POL    | 72SIN 01  |                  |       |     |        |           |
| 30                     |       |     | EXRF   | 81OHT 01  |                  |       |     |        |           |
| 30                     |       |     | ICPES  | 81GOO 01  |                  |       |     |        |           |
| 30                     | 2     | 5   | ITNA   | 80TOU 01  |                  |       |     |        |           |
| 30                     | 2     |     | AA     | 79MCQ 01  |                  |       |     |        |           |
| 30                     | 3     |     | PAA    | 80SEG 01  |                  |       |     |        |           |
| 30                     | 4     |     | ITNA   | 78FUR 01  |                  |       |     |        |           |
| 30.5                   | 1.2   |     | RTNA   | 76GAL 01  |                  |       |     |        |           |
| 31                     |       |     | OES    | 75JON 04  |                  |       |     |        |           |
| 32                     |       |     | OES    | 75JON 07  |                  |       |     |        |           |
| 34                     | 3     |     | PAA    | 78HIS 01  |                  |       |     |        |           |
| 35.6                   | 11.4  |     | XRF    | 77SMI 04  |                  |       |     |        |           |
| 36.4                   | 7     |     | ITNA   | 85MAD 01  |                  |       |     |        |           |
| 37                     |       |     | ICPES  | 84NAD 01  |                  |       |     |        |           |
| 38                     | 6     |     | FAA    | 77FUJ 01  |                  |       |     |        |           |
| 41                     |       |     | OES    | 75JON 08  |                  |       |     |        |           |
| 45                     |       |     | XRF    | 80SUZ 02  |                  |       |     |        |           |
| 56                     |       |     | CPXRF  | 76ZEI 01  |                  |       |     |        |           |
| 56                     |       |     | CPAA   | 78MCG 01  |                  |       |     |        |           |
| 77                     |       |     | EXRF   | 81PAR 01  |                  |       |     |        |           |
| 81                     |       |     | OES    | 75JON 01  |                  |       |     |        |           |

TABLE 1572-1: COMPILED DATA FOR NBS SRM 1572 CITRUS LEAVES (revised 3/1/86)

| ELE | UNITS | NBS         |     | CONSENSUS   |     | MEDIAN | RANGE       | AA         |     | NAA       |     | OTHER METHODS |     |        |
|-----|-------|-------------|-----|-------------|-----|--------|-------------|------------|-----|-----------|-----|---------------|-----|--------|
|     |       | Mean ± SD   | (n) | Mean ± SD   | (n) |        |             | Mean ± SD  | (n) | Mean ± SD | (n) | Mean ± SD     | (n) | Method |
| Al  | ug/g  | 92 ± 15     | (2) | 76.5        | (2) | ---    | 75 - 78     | ---        | --- | 75        | (1) | 78            | (1) | ICPES  |
| As  | ug/g  | 3.1 ± 0.3   | (4) | 3.0 ± 0.3   | (4) | 2.77   | 2.7 - 3.38  | ---        | --- | 3.0 ± 0.3 | (4) | ---           | --- | ---    |
| Au  | pg/g  | ---         | (1) | 110         | (1) | ---    | ---         | ---        | --- | 110       | (1) | ---           | --- | ---    |
| B   | ug/g  | ---         | (2) | 66.6        | (2) | ---    | 64.3 - 69   | ---        | --- | ---       | --- | 69            | (1) | ICPES  |
| B   | ug/g  | ---         | (2) | ---         | (2) | ---    | ---         | ---        | --- | ---       | --- | 64.3          | (1) | TCGS   |
| Ba  | ug/g  | 21 ± 3      | (2) | 23.5        | (2) | ---    | 23 - 24     | 23         | (1) | ---       | --- | 24            | (1) | ICPES  |
| Be  | ng/g  | ---         | (3) | 6.9 ± 0.8   | (3) | 7.2    | 6 - 7.6     | 6          | (1) | ---       | --- | ---           | --- | ---    |
| Be  | ng/g  | ---         | (3) | ---         | (3) | ---    | ---         | ---        | --- | ---       | --- | 7.4           | (2) | FAAC   |
| Br  | ug/g  | ---         | (1) | 8.36        | (1) | ---    | ---         | ---        | --- | 8.36      | (1) | ---           | --- | ---    |
| Ca  | %     | 3.15 ± 0.10 | (5) | 3.13 ± 0.04 | (5) | 3.14   | 3.07 - 3.19 | 3.10       | (2) | ---       | --- | 3.15 ± 0.04   | (3) | ICPES  |
| Cd  | ng/g  | 30 ± 10     | (2) | 46          | (2) | ---    | 37 - 55     | 55         | (1) | 37        | (1) | ---           | --- | ---    |
| Ce  | ng/g  | 280         | (2) | 453         | (2) | ---    | 392 - 514   | ---        | --- | 453       | (2) | ---           | --- | ---    |
| Cl  | ug/g  | 414         | (2) | 404         | (2) | ---    | 391 - 417   | ---        | --- | 417       | (1) | 391           | (1) | TCGS   |
| Co  | ng/g  | 20          | (1) | 16          | (1) | ---    | ---         | ---        | --- | 16        | (1) | ---           | --- | ---    |
| Cr  | ug/g  | 0.8 ± 0.2   | (1) | 1           | (1) | ---    | ---         | 1          | (1) | ---       | --- | ---           | --- | ---    |
| Cs  | ng/g  | 98          | (3) | 93 ± 16     | (3) | 85     | 83 - 111    | ---        | --- | 93 ± 16   | (3) | ---           | --- | ---    |
| Cu  | ug/g  | 16.5 ± 1.0  | (6) | 16 ± 1.0    | (6) | 15.9   | 14.6 - 17   | 16.7 ± 0.6 | (3) | 14.6      | (1) | 15            | (1) | ICPES  |
| Cu  | ug/g  | ---         | (6) | ---         | (6) | ---    | ---         | ---        | --- | ---       | --- | 15.9          | (1) | HPLC   |
| Dy  | ng/g  | ---         | (1) | 43          | (1) | ---    | ---         | ---        | --- | 43        | (1) | ---           | --- | ---    |
| Er  | ng/g  | ---         | (1) | 22          | (1) | ---    | ---         | ---        | --- | 22        | (1) | ---           | --- | ---    |
| Eu  | ng/g  | 10          | (2) | 13.5        | (2) | ---    | 12 - 15     | ---        | --- | 13.5      | (2) | ---           | --- | ---    |
| F   | ug/g  | ---         | (1) | 4           | (1) | ---    | ---         | ---        | --- | ---       | --- | 4             | (1) | COLOR  |
| Fe  | ug/g  | 90 ± 10     | (4) | 101 ± 6     | (4) | 96     | 95 - 109    | 96         | (2) | ---       | --- | 105.9         | (2) | ICPES  |
| Gd  | ng/g  | ---         | (1) | 39          | (1) | ---    | ---         | ---        | --- | 39        | (1) | ---           | --- | ---    |
| H   | %     | ---         | (1) | 5.96        | (1) | ---    | ---         | ---        | --- | ---       | --- | 5.96          | (1) | TCGS   |
| Hg  | ng/g  | 80 ± 20     | (3) | 81 ± 3      | (3) | 83     | 77 - 83     | 83         | (1) | 80        | (2) | ---           | --- | ---    |
| Ho  | ng/g  | ---         | (1) | 8           | (1) | ---    | ---         | ---        | --- | 8         | (1) | ---           | --- | ---    |
| I   | ug/g  | 1.84 ± 0.03 | (2) | 1.46        | (2) | ---    | 1.29 - 1.62 | ---        | --- | 1.46      | (2) | ---           | --- | ---    |
| K   | %     | 1.82 ± 0.06 | (5) | 1.83 ± 0.04 | (5) | 1.84   | 1.78 - 1.89 | 1.79       | (2) | ---       | --- | 1.84          | (2) | ICPES  |
| K   | %     | ---         | (5) | ---         | (5) | ---    | ---         | ---        | --- | ---       | --- | 1.89          | (1) | TCGS   |
| La  | ng/g  | 190         | (2) | 198         | (2) | ---    | 192 - 203   | ---        | --- | 198       | (2) | ---           | --- | ---    |
| Li  | ng/g  | ---         | (3) | 230 ± 105   | (3) | 190    | 150 - 350   | 270        | (2) | ---       | --- | 150           | (1) | AAC    |
| Lu  | ng/g  | ---         | (2) | 1.55        | (2) | ---    | 1.1 - 2     | ---        | --- | 1.55      | (2) | ---           | --- | ---    |
| Mg  | ug/g  | 5800 ± 300  | (5) | 5600 ± 70   | (5) | 5600   | 5500 - 5700 | 5650       | (2) | ---       | --- | 5570 ± 60     | (3) | ICPES  |

TABLE 1572-1: COMPILED DATA FOR NBS SRM 1572 CITRUS LEAVES (cont.)

| ELE           | UNITS | NBS         |     | CONSENSUS  |     | MEDIAN | RANGE       |      | AA        |            | NAA       |            | OTHER METHODS |       |
|---------------|-------|-------------|-----|------------|-----|--------|-------------|------|-----------|------------|-----------|------------|---------------|-------|
|               |       | Mean ± SD   | (n) | Mean ± SD  | (n) |        | Mean ± SD   | (n)  | Mean ± SD | (n)        | Mean ± SD | (n)        | Method        |       |
| Mn            | ug/g  | 23 ± 2      | (7) | 22.9 ± 1.4 | (7) | 23     | 21 - 25     | 24   | (2)       | 23.3       | (1)       | 22.4 ± 1.6 | (3)           | ICPES |
| Mn            | ug/g  | ---         | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | 22         | (1)           | TCGS  |
| Mo            | ng/g  | 170 ± 90    | (2) | 152        | (2) | ---    | 150 - 153   | ---  | ---       | 152        | (2)       | ---        | ---           | ---   |
| N             | %     | 2.86        | (1) | 3.62       | (1) | ---    | ---         | ---  | ---       | ---        | ---       | 3.62       | (1)           | TCGS  |
| Na            | ug/g  | 160 ± 20    | (3) | 163 ± 1    | (3) | 163    | 162 - 164   | ---  | ---       | 163        | (1)       | 163        | (2)           | ICPES |
| Nd            | ng/g  | ---         | (2) | 317        | (2) | ---    | 202 - 432   | ---  | ---       | 317        | (2)       | ---        | ---           | ---   |
| Ni            | ng/g  | 600 ± 300   | (2) | 715        | (2) | ---    | 600 - 830   | 600  | (1)       | ---        | ---       | 830        | (1)           | HPLC  |
| P             | ug/g  | 1300 ± 200  | (3) | 1310 ± 20  | (3) | 1300   | 1300 - 1332 | ---  | ---       | ---        | ---       | 1310 ± 20  | (3)           | ICPES |
| Pb            | ug/g  | 13.3 ± 2.4  | (2) | 13.4       | (2) | ---    | 13.2 - 13.6 | 13.6 | (1)       | ---        | ---       | 13.2       | (1)           | HPLC  |
| Pt            | pg/g  | ---         | (1) | 60         | (1) | ---    | ---         | ---  | ---       | 60         | (1)       | ---        | ---           | ---   |
| Rb            | ug/g  | 4.84 ± 0.06 | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | ---        | ---           | ---   |
| S             | ug/g  | 4070 ± 90   | (7) | 4080 ± 180 | (7) | 4066   | 3822 - 4400 | ---  | ---       | ---        | ---       | 3822       | (1)           | ICPES |
| S             | ug/g  | ---         | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | 4070 ± 90  | (4)           | CB    |
| S             | ug/g  | ---         | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | 4400       | (1)           | TCGS  |
| S             | ug/g  | ---         | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | 4066       | (1)           | IDMS  |
| S-32/34 ratio | ratio | ---         | (1) | 22.6310    | (1) | ---    | ---         | ---  | ---       | ---        | ---       | 22.6310    | (1)           | IDMS  |
| S-33/34 ratio | ratio | ---         | (1) | 0.1781     | (1) | ---    | ---         | ---  | ---       | ---        | ---       | 0.1781     | (1)           | IDMS  |
| Sb            | ng/g  | 40          | (1) | 34         | (1) | ---    | ---         | ---  | ---       | 34         | (1)       | ---        | ---           | ---   |
| Sc            | ng/g  | 10          | (3) | 10.4 ± 0.5 | (3) | 10.2   | 10 - 11     | ---  | ---       | 10.4 ± 0.5 | (3)       | ---        | ---           | ---   |
| Se            | ng/g  | 25          | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | ---        | ---           | ---   |
| Si            | %     | ---         | (1) | 0.19       | (1) | ---    | ---         | ---  | ---       | ---        | ---       | 0.19       | (1)           | TCGS  |
| Sm            | ng/g  | 52          | (2) | 50         | (2) | ---    | 49 - 52     | ---  | ---       | 50         | (2)       | ---        | ---           | ---   |
| Sn            | ng/g  | 240         | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | ---        | ---           | ---   |
| Sr            | ug/g  | 100 ± 2     | (5) | 98 ± 3     | (5) | 99.3   | 93 - 102    | 100  | (2)       | 93         | (1)       | 99.3       | (1)           | CPAA  |
| Sr            | ug/g  | ---         | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | 101        | (1)           | IDNAA |
| Tb            | ng/g  | ---         | (2) | 9          | (2) | ---    | 9 - 9       | ---  | ---       | 9          | (2)       | ---        | ---           | ---   |
| Te            | ng/g  | 20          | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | ---        | ---           | ---   |
| Ti            | ug/g  | ---         | (1) | 22         | (1) | ---    | ---         | 22   | (1)       | ---        | ---       | ---        | ---           | ---   |
| Tl            | ng/g  | < 10        | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | ---        | ---           | ---   |
| U             | ng/g  | < 150       | (3) | 40 ± 2     | (3) | 41     | 37 - 41     | ---  | ---       | 40 ± 2     | (3)       | ---        | ---           | ---   |
| V             | ng/g  | ---         | (2) | 240        | (2) | ---    | 235 - 245   | ---  | ---       | 235        | (1)       | 245        | (1)           | IDMS  |
| W             | ng/g  | ---         | (1) | 8.1        | (1) | ---    | ---         | ---  | ---       | 8.1        | (1)       | ---        | ---           | ---   |
| Yb            | ng/g  | ---         | (2) | 11.5       | (2) | ---    | 8 - 15      | ---  | ---       | 11.5       | (2)       | ---        | ---           | ---   |
| Zn            | ug/g  | 29 ± 2      | (6) | 29.9 ± 1.4 | (6) | 29.7   | 28 - 31.8   | 30.5 | (2)       | ---        | ---       | 29.6 ± 2.0 | (3)           | ICPES |
| Zn            | ug/g  | ---         | --- | ---        | --- | ---    | ---         | ---  | ---       | ---        | ---       | 29.7       | (1)           | HPLC  |

TABLE 1572-2: INDIVIDUAL DATA FOR NBS SRM 1572 (revised 3/1/86)

| Conc             | Uncer  | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|--------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (ug/g)</u> |        |     |        |           | <u>Ce (ng/g)</u> |       |     |        |           |
| 75               | 2      |     | IENA   | 85GLA 02  | 392              | 53    |     | RTNA   | 83TJI 01  |
| 78               | 12     |     | ICPES  | 85ISS 01  | 514              | 79    |     | RTNA   | 86TSU 01  |
| <u>As (ug/g)</u> |        |     |        |           | <u>Cl (ug/g)</u> |       |     |        |           |
| 2.7              | 0.3    |     | RTNA   | 85GAU 04  | 391              | 6     |     | TCGS   | 83AND 01  |
| 2.77             | 0.2    |     | RTNA   | 86GAU 01  | 417              |       |     | ITNA   | 86GAU 01  |
| 3.2              | 0.06   |     | RTNA   | 84GLA 11  |                  |       |     |        |           |
| 3.38             | 0.05   |     | RTNA   | 84BYR 02  | <u>Co (ng/g)</u> |       |     |        |           |
| <u>Au (pg/g)</u> |        |     |        |           | 16               | 1     |     | RTNA   | 84BYR 02  |
| 110              | 8      |     | RTNA   | 82ZEI 01  | <u>Cr (ug/g)</u> |       |     |        |           |
| <u>B (ug/g)</u>  |        |     |        |           | 1                | 0.5   |     | FAA    | 85GAU 04  |
| 64.3             | 0.6    |     | TCGS   | 83AND 01  | <u>Cs (ng/g)</u> |       |     |        |           |
| 69               | 0.3    |     | ICPES  | 84PRI 01  | 83               |       |     | ITNA   | 86GAU 01  |
| <u>Ba (ug/g)</u> |        |     |        |           | 85               | 6     |     | ITNA   | 84GLA 11  |
| 23               | 6      |     | FAA    | 86GAU 01  | 111              | 25    |     | ITNA   | 85GAU 04  |
| 24               | 1      |     | ICPES  | 85WHI 02  | <u>Cu (ug/g)</u> |       |     |        |           |
| <u>Be (ng/g)</u> |        |     |        |           | 14.6             | 0.3   |     | RTNA   | 84BYR 02  |
| 6                | 0.4    |     | FAA    | 86GAU 01  | 15               | 1.8   |     | ICPES  | 85ISS 01  |
| 7.2              |        |     | FAAC   | 86GAU 01  | 15.9             | 0.2   |     | HPLC   | 85ICH 01  |
| 7.6              | 1.6    |     | FAAC   | 85GAU 04  | 16               | 0.56  | 11  | AA     | 75ISA 01  |
| <u>Br (ug/g)</u> |        |     |        |           | 17               | 0.14  | 11  | AA     | 75ISA 01  |
| 8.36             |        |     | ITNA   | 86GAU 01  | 17               | 4     |     | AA     | 86GAU 01  |
| <u>Ca (%)</u>    |        |     |        |           | <u>Dy (ng/g)</u> |       |     |        |           |
| 3.07             | 0.0055 | 11  | AA     | 75ISA 01  | 43               | 7     |     | RTNA   | 86TSU 01  |
| 3.12             | 0.25   |     | ICPES  | 85ISS 01  | <u>Er (ng/g)</u> |       |     |        |           |
| 3.14             | 0.0053 | 11  | AA     | 75ISA 01  | 22               | 3     |     | RTNA   | 86TSU 01  |
| 3.15             | 0.29   |     | ICPES  | 85LYO 01  | <u>Eu (ng/g)</u> |       |     |        |           |
| 3.19             | 0.03   |     | ICPES  | 85WHI 02  | 12               | 0.2   |     | RTNA   | 83TJI 01  |
| 3.47             | 0.05   |     | TCGS   | 83AND 01  | 15               | 1     |     | RTNA   | 86TSU 01  |
| <u>Cd (ng/g)</u> |        |     |        |           | <u>F (ug/g)</u>  |       |     |        |           |
| 37               | 3      |     | RTNA   | 84BYR 02  | 4                |       |     | COLOR  | 83JAC 01  |
| 55               | 3      |     | AA     | 86GAU 01  |                  |       |     |        |           |

TABLE 1572-2: INDIVIDUAL DATA FOR NBS SRM 1572 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Fe (ug/g)</u> |       |     |        |           | <u>Mg (ug/g)</u> |       |     |        |           |
| 95               | 7.6   | 11  | AA     | 75ISA 01  | 5180             | 270   |     | AA     | 86GAU 01  |
| 96               | 8.6   | 11  | AA     | 75ISA 01  | 5500             | 300   |     | ICPES  | 85LYO 01  |
| 102.8            | 10.5  |     | ICPES  | 85LYO 01  | 5600             | 1.7   | 11  | AA     | 75ISA 01  |
| 109              | 8     |     | ICPES  | 85ISS 01  | 5600             | 100   |     | ICPES  | 85WHI 02  |
|                  |       |     |        |           | 5600             | 600   |     | ICPES  | 85ISS 01  |
|                  |       |     |        |           | 5700             | 3     | 11  | AA     | 75ISA 01  |
| <u>Gd (ng/g)</u> |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 39               | 6     |     | RTNA   | 86TSU 01  | 21               | 1     |     | ICPES  | 85WHI 02  |
|                  |       |     |        |           | 22               | 3     |     | ICPES  | 85ISS 01  |
|                  |       |     |        |           | 22               | 6     |     | TCGS   | 83AND 01  |
|                  |       |     |        |           | 23               | 0.12  | 11  | AA     | 75ISA 01  |
|                  |       |     |        |           | 23.3             | 0.7   |     | RTNA   | 84BYR 02  |
|                  |       |     |        |           | 24.1             | 1.9   |     | ICPES  | 85LYO 01  |
|                  |       |     |        |           | 25               | 0.5   | 11  | AA     | 75ISA 01  |
|                  |       |     |        |           | <u>Mo (ng/g)</u> |       |     |        |           |
|                  |       |     |        |           | 150              | 15    |     | RTNA   | 84BYR 02  |
|                  |       |     |        |           | 153              | 16    |     | RTNA   | 84BYR 01  |
|                  |       |     |        |           | <u>N (%)</u>     |       |     |        |           |
|                  |       |     |        |           | 3.62             | 0.04  |     | TCGS   | 83AND 01  |
|                  |       |     |        |           | <u>Na (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 162              | 15    |     | ICPES  | 85ISS 01  |
|                  |       |     |        |           | 163              |       |     | ITNA   | 86GAU 01  |
|                  |       |     |        |           | 164              | 13    |     | ICPES  | 85WHI 02  |
|                  |       |     |        |           | <u>Nd (ng/g)</u> |       |     |        |           |
|                  |       |     |        |           | 202              | 28    |     | RTNA   | 86TSU 01  |
|                  |       |     |        |           | 432              | 73    |     | RTNA   | 83TJI 01  |
|                  |       |     |        |           | <u>Ni (ng/g)</u> |       |     |        |           |
|                  |       |     |        |           | 600              | 50    |     | FAA    | 86GAU 01  |
|                  |       |     |        |           | 830              | 190   |     | HPLC   | 85ICH 01  |
|                  |       |     |        |           | <u>P (ug/g)</u>  |       |     |        |           |
|                  |       |     |        |           | 1300             |       |     | ICPES  | 85WHI 02  |
|                  |       |     |        |           | 1300             | 100   |     | ICPES  | 85ISS 01  |
|                  |       |     |        |           | 1332             | 11    |     | ICPES  | 84PRI 01  |
|                  |       |     |        |           | 1800             | 100   |     | ICPES  | 85LYO 01  |
| <u>Li (ng/g)</u> |       |     |        |           | <u>Lu (ng/g)</u> |       |     |        |           |
| 150              | 20    |     | AAC    | 85GAU 04  |                  |       |     |        |           |
| 190              | 10    |     | AA     | 86GAU 01  |                  |       |     |        |           |
| 350              | 50    |     | AA     | 85GAU 04  |                  |       |     |        |           |
|                  |       |     |        |           |                  |       |     |        |           |
| 1.1              | 0.1   |     | RTNA   | 83TJI 01  |                  |       |     |        |           |
| 2                | 0.4   |     | RTNA   | 86TSU 01  |                  |       |     |        |           |

TABLE 1572-2: INDIVIDUAL DATA FOR NBS SRM 1572 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Pb (ug/g)</u>       |       |     |        |           | <u>Sr (ug/g)</u> |       |     |        |           |
| 13.2                   | 0.5   |     | HPLC   | 85ICH 01  | 93               | 5     |     | IENA   | 85GAU 04  |
| 13.6                   | 1.1   |     | FAA    | 85GAU 04  | 97               | 1     |     | AA     | 85GAU 04  |
| <u>Pt (pg/g)</u>       |       |     |        |           | <u>Tb (ng/g)</u> |       |     |        |           |
| 60                     | 30    |     | RTNA   | 82ZEI 01  | 99.3             | 3.5   |     | CPAA   | 85MAS 01  |
| <u>S (ug/g)</u>        |       |     |        |           | <u>Ti (ug/g)</u> |       |     |        |           |
| 3600                   |       |     | TURB   | 84JAC 01  | 100.6            | 2.6   |     | IDNAA  | 85YAG 01  |
| 3822                   | 58    |     | ICPES  | 84PRI 01  | 102              | 1     |     | AA     | 86GAU 01  |
| 3990                   | 90    |     | CB     | 86BOW 01  | <u>U (ng/g)</u>  |       |     |        |           |
| 4000                   | 300   |     | CB     | 84GLA 11  | 37               | 5     |     | DNA    | 85GAU 04  |
| 4066                   | 22    |     | IDMS   | 84KEL 01  | 41               |       |     | DNA    | 84GLA 02  |
| 4140                   |       | D   | CB     | 85JAC 01  | 41               | 5     |     | DNA    | 86GAU 01  |
| 4140                   | 100   | 6   | CB     | 84JAC 01  | <u>V (ng/g)</u>  |       |     |        |           |
| 4160                   |       | D   | CB     | 85JAC 01  | 235              | 14    |     | RTNA   | 84BYR 02  |
| 4160                   | 70    | 6   | CB     | 84JAC 01  | 245              | 5     |     | IDMS   | 85FAS 02  |
| 4400                   | 200   |     | TCGS   | 83AND 01  | <u>W (ng/g)</u>  |       |     |        |           |
| 4590                   | 70    |     | ICPES  | 85WHI 02  | 8.1              | 0.5   |     | RTNA   | 84BYR 01  |
| <u>S-32/34 (ratio)</u> |       |     |        |           | <u>Yb (ng/g)</u> |       |     |        |           |
| 22.631                 |       |     | IDMS   | 84KEL 01  | 8                | 1     |     | RTNA   | 83TJI 01  |
| <u>S-33/34 (ratio)</u> |       |     |        |           | 15               | 3     |     | RTNA   | 86TSU 01  |
| 0.1781                 |       |     | IDMS   | 84KEL 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| <u>Sb (ng/g)</u>       |       |     |        |           | 28               | 1     |     | ICPES  | 85WHI 02  |
| 34                     | 1     |     | RTNA   | 84BYR 02  | 29               | 4     |     | ICPES  | 85ISS 01  |
| <u>Sc (ng/g)</u>       |       |     |        |           | 29.7             | 0.5   |     | HPLC   | 85ICH 01  |
| 10                     | 3     |     | ITNA   | 86GAU 01  | 30               | 1.5   | 11  | AA     | 75ISA 01  |
| 10.2                   | 1.1   |     | ITNA   | 84GLA 11  | 31               | 0.62  | 11  | AA     | 75ISA 01  |
| 11                     |       |     | ITNA   | 85GAU 04  | 31.8             | 4.1   |     | ICPES  | 85LYO 01  |
| <u>Si (%)</u>          |       |     |        |           | <u>Sm (ng/g)</u> |       |     |        |           |
| 0.19                   | 0.06  |     | TCGS   | 83AND 01  | 49               | 4     |     | RTNA   | 83TJI 01  |
| <u>Sm (ng/g)</u>       |       |     |        |           | 52               | 8     |     | RTNA   | 86TSU 01  |

TABLE 1573-1: COMPILED DATA FOR NBS SRM 1573 TOMATO LEAVES (revised 3/1/86)

| ELE | UNITS | NBS         |      | CONSENSUS    |      | MEDIAN | RANGE         | AA          |      | NAA         |      | OTHER METHODS |            |             |           |
|-----|-------|-------------|------|--------------|------|--------|---------------|-------------|------|-------------|------|---------------|------------|-------------|-----------|
|     |       | Mean ± SD   | (n)  | Mean ± SD    | (n)  |        |               | Mean ± SD   | (n)  | Mean ± SD   | (n)  | Method        | Mean ± SD  | (n)         | Method    |
| Ag  | ng/g  | ---         | (1)  | 180          | (1)  | ---    | ---           | ---         | (1)  | ---         | (1)  | ---           | ---        |             |           |
| Al  | ug/g  | 1200        | (10) | 1000 ± 300   | (10) | 1160   | 628 - 1300    | 1250        | (1)  | 1268 ± 39   | (3)  | 850 ± 300     | (5) ICPEs  | 427         | (2) COLOR |
| As  | ng/g  | 270 ± 50    | (24) | 253 ± 36     | (24) | 260    | 170 - 310     | 262 ± 37    | (13) | 231 ± 30    | (8)  | 270           | (1) ICPEs  | 290         | (1) COLOR |
| As  | ng/g  | ---         | ---  | ---          | ---  | ---    | ---           | ---         | ---  | ---         | ---  | ---           | ---        | 270         | (1) MPOES |
| Au  | ng/g  | ---         | (1)  | 0.8          | (1)  | ---    | ---           | ---         | (1)  | 0.8         | (1)  | ---           | ---        | ---         | ---       |
| B   | ug/g  | 30          | (18) | 33 ± 4       | (18) | 34     | 25.5 - 38     | ---         | ---  | ---         | ---  | 34 ± 5        | (5) ICPEs  | 34 ± 2      | (3) TCGS  |
| B   | ug/g  | ---         | ---  | ---          | ---  | ---    | ---           | ---         | ---  | ---         | ---  | 33 ± 5        | (11) OES   | ---         | ---       |
| Ba  | ug/g  | ---         | (10) | 57 ± 9       | (10) | 58     | 40 - 69       | ---         | (3)  | 63 ± 6      | (3)  | 64.7          | (2) ICPEs  | ---         | ---       |
| Be  | ng/g  | ---         | (2)  | 32           | (2)  | ---    | 26 - 38       | ---         | ---  | ---         | ---  | 26            | (1) ICPEs  | 38          | (1) FAAC  |
| Br  | ug/g  | 26          | (11) | 21 ± 2       | (11) | 21     | 19 - 25.31    | ---         | (10) | 22 ± 2      | (10) | 20.3          | (1) XRF    | ---         | ---       |
| C   | %     | ---         | (3)  | 37.78 ± 0.12 | (3)  | 37.8   | 37.67 - 37.92 | ---         | ---  | ---         | ---  | 37.80 ± 0.12  | (3) CB     | ---         | ---       |
| Ca  | %     | 3.00 ± 0.03 | (31) | 2.83 ± 0.23  | (31) | 2.88   | 2.38 - 3.28   | 2.84 ± 0.06 | (4)  | 2.7 ± 0.4   | (3)  | 2.97 ± 0.08   | (10) ICPEs | 2.76 ± 0.14 | (3) XRF   |
| Cd  | ug/g  | 3           | (28) | 2.5 ± 0.2    | (28) | 2.55   | 2.1 - 3       | 2.5 ± 0.3   | (13) | 2.7         | (1)  | 2.58 ± 0.20   | (9) ICPEs  | 2.65 ± 0.13 | (3) ASV   |
| Cd  | ug/g  | ---         | ---  | ---          | ---  | ---    | ---           | ---         | ---  | ---         | ---  | ---           | ---        | 2.25        | (2) POL   |
| Ce  | ug/g  | 1.6         | (4)  | 1.3 ± 0.2    | (4)  | 1.28   | 1 - 1.56      | ---         | (4)  | 1.3 ± 0.2   | (4)  | ---           | ---        | ---         | ---       |
| Cl  | %     | ---         | (4)  | 1.07 ± 0.03  | (4)  | 1.05   | 1.04 - 1.10   | ---         | (4)  | 1.07 ± 0.03 | (4)  | ---           | ---        | ---         | ---       |
| Co  | ng/g  | 600         | (7)  | 525 ± 46     | (7)  | 510    | 467 - 610     | 518 ± 28    | (3)  | 531 ± 60    | (4)  | ---           | ---        | ---         | ---       |
| Cr  | ug/g  | 4.5 ± 0.5   | (19) | 4.0 ± 0.5    | (19) | 3.9    | 3 - 4.6       | 4.3 ± 0.3   | (7)  | 3.8 ± 0.5   | (5)  | 3.6 ± 0.9     | (5) ICPEs  | 4.15        | (2) XRF   |
| Cs  | ng/g  | ---         | (7)  | 57 ± 8       | (7)  | 56     | 43 - 70       | ---         | (7)  | 57 ± 8      | (7)  | ---           | ---        | ---         | ---       |
| Cu  | ug/g  | 11 ± 1      | (51) | 11 ± 2       | (51) | 10.81  | 6.9 - 15      | 11.6 ± 0.9  | (12) | 11 ± 3      | (7)  | 9.6 ± 0.8     | (11) ICPEs | 9 ± 3       | (3) XRF   |
| Cu  | ug/g  | ---         | ---  | ---          | ---  | ---    | ---           | ---         | ---  | ---         | ---  | ---           | ---        | 11          | (2) AF    |
| Cu  | ug/g  | ---         | ---  | ---          | ---  | ---    | ---           | ---         | ---  | ---         | ---  | 7.7           | (2) POL    | 10.6        | (1) IDMS  |
| Cu  | ug/g  | ---         | ---  | ---          | ---  | ---    | ---           | ---         | ---  | ---         | ---  | 11            | (1) CPAA   | 10.8        | (2) COLOR |
| Dy  | ng/g  | ---         | (1)  | 68           | (1)  | ---    | ---           | ---         | (1)  | 68          | (1)  | ---           | ---        | ---         | ---       |
| Er  | ng/g  | ---         | (1)  | 51           | (1)  | ---    | ---           | ---         | (1)  | 51          | (1)  | ---           | ---        | ---         | ---       |
| Eu  | ng/g  | 40          | (5)  | 22 ± 6       | (5)  | 25     | 15 - 27       | ---         | (5)  | 22 ± 6      | (5)  | ---           | ---        | ---         | ---       |

TABLE 1573-1: COMPILED DATA FOR NBS SRM 1573 TOMATO LEAVES (cont.)

| ELE     | UNITS | NBS         |      | CONSENSUS   |      | MEDIAN | RANGE       |             | AA        |             | NAA       |     | OTHER METHODS |           |       |        |     |      |
|---------|-------|-------------|------|-------------|------|--------|-------------|-------------|-----------|-------------|-----------|-----|---------------|-----------|-------|--------|-----|------|
|         |       | Mean ± SD   | (n)  | Mean ± SD   | (n)  |        | Mean ± SD   | (n)         | Mean ± SD | (n)         | Mean ± SD | (n) | Method        | Mean ± SD | (n)   | Method |     |      |
| F       | ug/g  | ---         |      | 5.5 ± 0.4   | (4)  | 5.4    | 5 - 6       | ---         | ---       | ---         | ---       | --- | 5.7 ± 0.3     | (3)       | ISE   | 5      | (1) | MS   |
| Fe      | ug/g  | 690 ± 25    | (43) | 580 ± 110   | (43) | 604    | 340 - 706   | 585 ± 115   | (8)       | 628 ± 97    | (7)       | --- | 620 ± 50      | (11)      | ICPES | 586    | (2) | XRF  |
| Fe      | ug/g  | ---         |      | ---         |      | ---    | ---         | ---         |           | ---         |           | --- | 592 ± 15      | (3)       | COLOR | 698    | (1) | VOLT |
| Fe      | ug/g  | ---         |      | ---         |      | ---    | ---         | ---         |           | ---         |           | --- | 675.8         | (1)       | CPAA  | 650    | (2) | AF   |
| Fe(II)  | ug/g  | ---         | (1)  | 540         | (1)  | ---    | ---         | ---         |           | ---         |           | --- | 540           | (1)       | VOLT  | ---    |     |      |
| Fe(III) | ug/g  | ---         | (1)  | 158         | (1)  | ---    | ---         | ---         |           | ---         |           | --- | 158           | (1)       | VOLT  | ---    |     |      |
| Ga      | ng/g  | ---         | (2)  | 76.15       | (2)  | ---    | 69.3 - 83   | 83          | (1)       | 69.3        | (1)       | --- | ---           |           |       | ---    |     |      |
| Gd      | ng/g  | ---         | (2)  | 75          | (2)  | ---    | 74 - 76     | ---         |           | 75          | (2)       | --- | ---           |           |       | ---    |     |      |
| H       | %     | ---         | (3)  | 5.08 ± 0.07 | (3)  | 5.1    | 5.00 - 5.14 | ---         |           | ---         |           | --- | 5.12          | (2)       | CB    | 5      | (1) | TCGS |
| Hf      | ng/g  | ---         | (1)  | 250         | (1)  | ---    | ---         | ---         |           | 250         | (1)       | --- | ---           |           |       | ---    |     |      |
| Hg      | ng/g  | 100         | (3)  | 103 ± 22    | (3)  | 91     | 90 - 128    | 91          | (1)       | 109         | (2)       | --- | ---           |           |       | ---    |     |      |
| Ho      | ng/g  | ---         | (1)  | 13          | (1)  | ---    | ---         | ---         |           | 13          | (1)       | --- | ---           |           |       | ---    |     |      |
| I       | ng/g  | ---         | (3)  | 323 ± 58    | (3)  | 300    | 280 - 390   | ---         |           | 335         | (2)       | --- | 300           | (1)       | PAA   | ---    |     |      |
| In      | ng/g  | ---         | (1)  | 0.96        | (1)  | ---    | ---         | ---         |           | 0.96        | (1)       | --- | ---           |           |       | ---    |     |      |
| K       | %     | 4.46 ± 0.03 | (28) | 4.44 ± 0.24 | (28) | 4.4    | 3.85 - 4.81 | 4.49 ± 0.31 | (6)       | 4.34 ± 0.16 | (5)       | --- | 4.41 ± 0.10   | (7)       | ICPES | 4.59   | (2) | XRF  |
| La      | ng/g  | 900         | (6)  | 710 ± 70    | (6)  | 677    | 630 - 800   | ---         |           | 710 ± 70    | (6)       | --- | ---           |           |       | ---    |     |      |
| Lu      | ng/g  | ---         | (3)  | 9.3 ± 2.5   | (3)  | 9      | 7 - 12      | ---         |           | 9.3 ± 2.5   | (3)       | --- | ---           |           |       | ---    |     |      |
| Mg      | ug/g  | 7000        | (25) | 6850 ± 330  | (25) | 6800   | 6100 - 7400 | 6850 ± 170  | (4)       | 6650        | (2)       | --- | 6740 ± 180    | (10)      | ICPES | ---    |     |      |
| Mn      | ug/g  | 238 ± 7     | (43) | 224 ± 13    | (43) | 226    | 197 - 252   | 224 ± 10    | (11)      | 225 ± 24    | (6)       | --- | 227 ± 8       | (12)      | ICPES | 235    | (1) | NM   |
| Mn      | ug/g  | ---         |      | ---         |      | ---    | ---         | ---         |           | ---         |           | --- | 230 ± 34      | (3)       | XRF   | 228    | (2) | AF   |
| Mo      | ug/g  | ---         | (6)  | 0.53 ± 0.09 | (6)  | 0.5    | 0.4 - 0.65  | ---         |           | 0.64        | (2)       | --- | 0.48 ± 0.05   | (4)       | ICPES | ---    |     |      |
| N       | %     | 5           | (3)  | 4.93 ± 0.03 | (3)  | 4.94   | 4.9 - 4.95  | ---         |           | ---         |           | --- | 4.94          | (2)       | CB    | 4.9    | (1) | TCGS |
| Na      | ug/g  | ---         | (19) | 470 ± 110   | (19) | 500    | 326 - 650   | 440 ± 130   | (4)       | 515 ± 62    | (5)       | --- | 420 ± 110     | (5)       | ICPES | ---    |     |      |
| Nd      | ng/g  | ---         | (3)  | 620 ± 70    | (3)  | 580    | 566 - 700   | ---         |           | 620 ± 70    | (3)       | --- | ---           |           |       | ---    |     |      |
| Ni      | ug/g  | ---         | (7)  | 1.3 ± 0.2   | (7)  | 1.2    | 1.1 - 1.7   | ---         |           | 1.2         | (1)       | --- | 1.3 ± 0.2     | (6)       | ICPES | ---    |     |      |

TABLE 1573-1: COMPILED DATA FOR NBS SRM 1573 TOMATO LEAVES (cont..)

| ELE | UNITS | NBS        |      | CONSENSUS  |      | MEDIAN | RANGE       |            | AA        |           | NAA       |             | OTHER METHODS |           |            |           |
|-----|-------|------------|------|------------|------|--------|-------------|------------|-----------|-----------|-----------|-------------|---------------|-----------|------------|-----------|
|     |       | Mean ± SD  | (n)  | Mean ± SD  | (n)  |        | Mean ± SD   | (n)        | Mean ± SD | (n)       | Mean ± SD | (n)         | Method        | Mean ± SD | (n) Method |           |
| P   | ug/g  | 3400 ± 200 | (28) | 3370 ± 220 | (28) | 3318   | 2800 - 3900 | 3350 ± 130 | (4)       | 3420      | (1)       | 3430 ± 210  | (13)          | ICPES     | 3400       | (1) CPAA  |
| Pb  | ug/g  | 6.3 ± 0.3  | (41) | 5.9 ± 0.8  | (41) | 6      | 4 - 8.1     | 5.9 ± 0.4  | (27)      | ---       | ---       | 6.8 ± 1.9   | (6)           | ICPES     | 5.9        | (1) XRF   |
| Pb  | ug/g  | ---        | ---  | ---        | ---  | ---    | ---         | ---        | ---       | ---       | ---       | 6.03        | (1)           | IDMS      | 6.23       | (1) CPAA  |
| Pb  | ug/g  | ---        | ---  | ---        | ---  | ---    | ---         | ---        | ---       | ---       | ---       | 5.5 ± 1.1   | (4)           | ASV       | 3.85       | (2) POL   |
| Pd  | ng/g  | ---        | ---  | < 2        | ---  | ---    | ---         | ---        | ---       | < 2       | ---       | ---         | ---           | ---       | ---        | ---       |
| Pr  | ng/g  | ---        | (2)  | 187        | (2)  | ---    | 184 - 190   | ---        | ---       | 187       | (2)       | ---         | ---           | ---       | ---        | ---       |
| Rb  | ug/g  | 16.5 ± 0.1 | (7)  | 17.3 ± 2.5 | (7)  | 16.5   | 15.16 - 22  | ---        | ---       | 17 ± 2    | (6)       | 19.2        | (1)           | XRF       | ---        | ---       |
| S   | ug/g  | ---        | (8)  | 6200 ± 400 | (8)  | 5960   | 5500 - 6900 | ---        | ---       | ---       | ---       | 6374        | (2)           | ICPES     | 5960       | (1) XRF   |
| S   | ug/g  | ---        | ---  | ---        | ---  | ---    | ---         | ---        | ---       | ---       | ---       | 6100 ± 400  | (5)           | CB        | ---        | ---       |
| Sb  | ng/g  | ---        | (5)  | 36 ± 7     | (5)  | 34     | 30 - 46     | 34         | (1)       | 36 ± 8    | (4)       | ---         | ---           | ---       | ---        | ---       |
| Sc  | ng/g  | 130        | (9)  | 173 ± 26   | (9)  | 170    | 138 - 220   | ---        | ---       | 173 ± 26  | (9)       | ---         | ---           | ---       | ---        | ---       |
| Se  | ng/g  | ---        | (4)  | 54 ± 6     | (4)  | 50     | 49 - 61     | ---        | ---       | 49.5      | (2)       | 59          | (2)           | GC        | ---        | ---       |
| Si  | ug/g  | ---        | (1)  | 3000       | (1)  | ---    | ---         | ---        | ---       | ---       | ---       | 3000        | (1)           | ICPES     | ---        | ---       |
| Sm  | ng/g  | ---        | (3)  | 92 ± 16    | (3)  | 86     | 81 - 110    | ---        | ---       | 92 ± 16   | (3)       | ---         | ---           | ---       | ---        | ---       |
| Sr  | ug/g  | 44.9 ± 0.3 | (12) | 42 ± 5     | (12) | 43.7   | 35.6 - 54   | 42.95      | (2)       | 49 ± 15   | (3)       | 36          | (1)           | ICPES     | 44         | (1) XRF   |
| Sr  | ug/g  | ---        | ---  | ---        | ---  | ---    | ---         | ---        | ---       | ---       | ---       | 45.3        | (1)           | IDNAA     | 43.85      | (2) CPAA  |
| Ta  | ng/g  | ---        | (1)  | 430        | (1)  | ---    | ---         | ---        | ---       | 430       | (1)       | ---         | ---           | ---       | ---        | ---       |
| Tb  | ng/g  | ---        | (3)  | 9 ± 5      | (3)  | 12     | 4 - 12      | ---        | ---       | 9 ± 5     | (3)       | ---         | ---           | ---       | ---        | ---       |
| Th  | ng/g  | 170 ± 30   | (2)  | 205        | (2)  | ---    | 190 - 220   | ---        | ---       | 205       | (2)       | ---         | ---           | ---       | ---        | ---       |
| Ti  | ug/g  | ---        | (3)  | 56 ± 39    | (3)  | 68     | 12.6 - 89   | ---        | ---       | 68        | (1)       | 12.6        | (1)           | ICPES     | 89         | (1) COLOR |
| Tl  | ng/g  | 50         | (2)  | 22         | (2)  | ---    | 20 - 24     | ---        | ---       | ---       | ---       | 22          | (2)           | ASV       | ---        | ---       |
| U   | ng/g  | 61 ± 3     | (6)  | 59 ± 6     | (6)  | 60     | 50.2 - 63   | ---        | ---       | 59 ± 6    | (6)       | ---         | ---           | ---       | ---        | ---       |
| V   | ug/g  | ---        | (8)  | 1.2 ± 0.2  | (8)  | 1.27   | 0.87 - 1.5  | ---        | ---       | 1.1 ± 0.2 | (5)       | 1.37 ± 0.16 | (3)           | ICPES     | ---        | ---       |
| W   | ng/g  | ---        | ---  | < 40       | ---  | ---    | ---         | ---        | ---       | < 40      | ---       | ---         | ---           | ---       | ---        | ---       |
| Yb  | ng/g  | ---        | (3)  | 63 ± 16    | (3)  | 63     | 47 - 80     | ---        | ---       | 63 ± 16   | (3)       | ---         | ---           | ---       | ---        | ---       |
| Zn  | ug/g  | 62 ± 6     | (45) | 61 ± 4     | (45) | 61     | 52 - 71     | 62 ± 5     | (11)      | 61 ± 5    | (5)       | 61 ± 4      | (16)          | ICPES     | 62.5       | (1) CPAA  |
| Zn  | ug/g  | ---        | ---  | ---        | ---  | ---    | ---         | ---        | ---       | ---       | ---       | 59          | (2)           | AF        | 62.9       | (2) POL   |
| Zn  | ug/g  | ---        | ---  | ---        | ---  | ---    | ---         | ---        | ---       | ---       | ---       | 65 ± 9      | (3)           | XRF       | ---        | ---       |

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>As (ng/g) cont.</u> |       |     |        |           |
| 180              | 50    |     | RTNA   | 80SLO 01  | 290                    | 10    | 11  | HAA    | 82JON 01  |
|                  |       |     |        |           | 290                    | 20    | 11  | HAA    | 82JON 01  |
| <u>Al (ug/g)</u> |       |     |        |           | 300                    | 30    |     | FAA    | 80DUP 01  |
| 182              |       |     | OES    | 75JON 02  | 310                    | 10    |     | HAA    | 80TAM 01  |
| 228              |       |     | OES    | 75JON 11  | 330                    | 30    |     | IENA   | 82GLA 02  |
| 280              |       |     | OES    | 75JON 07  | <u>Au (ng/g)</u>       |       |     |        |           |
| 286              |       |     | OES    | 75JON 08  | 0.8                    | 0.1   |     | RTNA   | 80SLO 01  |
| 296              |       |     | OES    | 75JON 06  | <u>B (ug/g)</u>        |       |     |        |           |
| 321              | 37    | 11  | ICPES  | 81MUN 01  | 25.5                   | 1.1   |     | ICPES  | 79HER 01  |
| 356              |       |     | OES    | 75JON 03  | 26                     |       |     | OES    | 75JON 10  |
| 382              |       |     | OES    | 75JON 04  | 28                     |       |     | OES    | 75JON 02  |
| 391              |       |     | OES    | 75JON 09  | 29                     |       |     | OES    | 75JON 07  |
| 417.4            | 8.3   | 6   | COLOR  | 85BAR 01  | 30                     |       |     | OES    | 75JON 04  |
| 436.3            | 11.5  | 6   | COLOR  | 85BAR 01  | 32                     |       |     | OES    | 75JON 03  |
| 495              |       |     | OES    | 75JON 05  | 32                     |       |     | OES    | 75JON 01  |
| 628              |       |     | ICPES  | 81GOO 01  | 32                     |       |     | OES    | 75JON 06  |
| 639              | 21    |     | ICPES  | 83SCH 03  | 32                     | 3     | 35  | TCGS   | 81GLA 04  |
| 661              | 18    | 11  | ICPES  | 81MUN 01  | 34                     | 2.8   | 11  | ICPES  | 81MUN 01  |
| 835              |       |     | OES    | 75JON 01  | 35                     |       |     | OES    | 75JON 09  |
| 1160             |       |     | ICPES  | 84NAD 01  | 35                     | 4     |     | TCGS   | 84GLA 11  |
| 1170             | 60    | 11  | ICPES  | 82JON 01  | 35.5                   |       |     | ICPES  | 81GOO 01  |
| 1225             | 239   |     | ITNA   | 77NAD 02  | 36                     | 3     |     | TCGS   | 82GLA 02  |
| 1250             | 200   |     | AA     | 83RAP 01  | 36.1                   | 1.5   | 11  | ICPES  | 81MUN 01  |
| 1280             |       |     | ITNA   | 82GLA 02  | 37                     |       |     | OES    | 75JON 08  |
| 1300             | 80    |     | ITNA   | 80SLO 01  | 37                     |       |     | OES    | 75JON 05  |
| <u>As (ng/g)</u> |       |     |        |           | 38                     | 0.1   |     | ICPES  | 84PRI 01  |
| 118              | 10    | 7   | FAA    | 82HOE 02  | 42                     |       |     | OES    | 75JON 11  |
| 170              | 10    | 7   | FAA    | 82HOE 02  | <u>Ba (ug/g)</u>       |       |     |        |           |
| 180              | 40    |     | ITNA   | 85NDI 01  | 40                     |       |     | OES    | 75JON 03  |
| 200              | 40    |     | RTNA   | 80SLO 01  | 47                     |       |     | OES    | 75JON 04  |
| 225              | 3     |     | RTNA   | 79HOE 01  | 49                     |       |     | OES    | 75JON 11  |
| 230              | 30    | 7   | RTNA   | 80GAL 02  | 56.5                   | 11.24 |     | NAA    | 76GUZ 01  |
| 230              | 30    | 11  | HAA    | 81RAP 01  | 58                     |       |     | OES    | 75JON 05  |
| 240              |       |     | IENA   | 84GLA 02  | 59                     |       |     | OES    | 75JON 01  |
| 240              | 25    |     | RTNA   | 85GAU 04  | 63                     | 5     |     | ITNA   | 77NAD 02  |
| 245              | 5     | 7   | FAA    | 82HOE 02  | 63.4                   |       |     | ICPES  | 84NAD 01  |
| 250              | 30    |     | HAA    | 81KNA 01  | 66                     | 3     |     | ICPES  | 85WHI 02  |
| 250              | 30    | 11  | HAA    | 81RAP 01  | 69                     | 14    |     | ITNA   | 79REN 03  |
| 260              |       |     | HAA    | 81ARA 01  | <u>Be (ng/g)</u>       |       |     |        |           |
| 260              | 30    |     | ITNA   | 77NAD 02  | 26                     | 10    |     | ICPES  | 83SCH 03  |
| 260              | 30    | 11  | HAA    | 81RAP 01  | 38                     | 4     |     | FAAC   | 85GAU 04  |
| 260              | 80    |     | HAA    | 81YAN 01  |                        |       |     |        |           |
| 270              |       | H   | ICPES  | 81PIC 01  |                        |       |     |        |           |
| 270              | 40    |     | RTNA   | 86GAU 01  |                        |       |     |        |           |
| 270              | 50    |     | MPOES  | 83SAR 01  |                        |       |     |        |           |
| 290              | 10    |     | AA     | 83RAP 01  |                        |       |     |        |           |
| 290              | 10    |     | COLOR  | 77BUR 01  |                        |       |     |        |           |

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |  | <u>Conc</u>         | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|--|---------------------|--------------|------------|---------------|------------------|
| <u>Br (ug/g)</u> |              |            |               |                  |  | <u>Ca (%) cont.</u> |              |            |               |                  |
| 19               | 1.5          | 5          | ITNA          | 80HOE 01         |  | 3.1                 |              |            | ITNA          | 82GLA 02         |
| 19.8             | 0.6          | 5          | IENA          | 79GLA 02         |  | 3.1                 | 0.03         | 11         | ICPES         | 82JON 01         |
| 20.1             | 1.2          | 5          | ITNA          | 80HOE 01         |  | 3.19                |              |            | OES           | 75JON 06         |
| 20.3             | 1.1          |            | CPXRF         | 84BIS 01         |  | 3.28                |              |            | OES           | 75JON 01         |
| 20.8             | 2.4          |            | ITNA          | 80SLO 01         |  | 3.41                | 0.09         |            | ICPES         | 79HER 01         |
| 21               | 1.2          | 5          | IENA          | 79GLA 02         |  | 3.49                | 0.12         |            | ITNA          | 77NAD 02         |
| 21               | 3            |            | ITNA          | 79REN 03         |  | 3.55                |              |            | ICPES         | 84NAD 01         |
| 21.9             | 0.2          |            | ITNA          | 77NAD 02         |  | 5.82                |              |            | EXRF          | 81PAR 01         |
| 22.5             |              |            | ITNA          | 85GAU 04         |  |                     |              |            |               |                  |
| 24.6             |              |            | ITNA          | 86GAU 01         |  |                     |              |            |               |                  |
| 25.31            | 1            |            | ITNA          | 77STE 02         |  |                     |              |            |               |                  |
| 29               | 2            | 35         | NAA           | 81GLA 03         |  |                     |              |            |               |                  |
| 54               |              |            | EXRF          | 81PAR 01         |  |                     |              |            |               |                  |
| <u>C (%)</u>     |              |            |               |                  |  | <u>Cd (ug/g)</u>    |              |            |               |                  |
| 37.67            | 0.45         |            | CB            | 82GLA 02         |  | 1.6                 |              | 11         | FAA           | 80PRE 01         |
| 37.8             | 0.9          |            | CB            | 77WAT 02         |  | 2.1                 |              | 6          | POL           | 72SIN 01         |
| 37.92            | 0.26         |            | CB            | 80SCH 02         |  | 2.2                 |              | 11         | FAA           | 80PRE 01         |
|                  |              |            |               |                  |  | 2.3                 |              | 11         | FAA           | 80PRE 01         |
|                  |              |            |               |                  |  | 2.3                 |              |            | FAA           | 80PRE 01         |
|                  |              |            |               |                  |  | 2.3                 |              | 11         | FAA           | 80PRE 01         |
|                  |              |            |               |                  |  | 2.3                 |              |            | ICPES         | 84NAD 01         |
|                  |              |            |               |                  |  | 2.3                 |              | 11         | FAA           | 80PRE 01         |
|                  |              |            |               |                  |  | 2.3                 | 0.1          |            | FAA           | 80LEG 01         |
|                  |              |            |               |                  |  | 2.4                 | 0.01         | 11         | ICPES         | 82JON 01         |
|                  |              |            |               |                  |  | 2.4                 | 0.22         | 6          | POL           | 72SIN 01         |
| 2.22             | 0.08         |            | ITNA          | 80SLO 01         |  | 2.5                 |              |            | FAA           | 82PRE 01         |
| 2.38             |              |            | OES           | 75JON 04         |  | 2.5                 |              |            | ASV           | 82GAJ 01         |
| 2.4              | 0.07         |            | ITNA          | 79REN 03         |  | 2.5                 | 0.1          |            | ICPES         | 83SCH 03         |
| 2.42             |              |            | OES           | 75JON 07         |  | 2.55                | 0.09         | 11         | ICPES         | 82JON 01         |
| 2.43             |              |            | OES           | 75JON 03         |  | 2.56                | 0.06         | 11         | ICPES         | 82JON 01         |
| 2.55             |              |            | OES           | 75JON 02         |  | 2.6                 | 0.1          | 11         | ICPES         | 82JON 01         |
| 2.62             |              |            | OES           | 75JON 08         |  | 2.6                 | 0.2          |            | FAA           | 84GLA 11         |
| 2.64             |              |            | OES           | 75JON 10         |  | 2.6                 | 0.3          | 11         | ICPES         | 81MUN 01         |
| 2.65             | 0.07         | 6          | EXRF          | 79MAT 01         |  | 2.66                | 0.1          |            | FAA           | 83DEL 01         |
| 2.7              | 0.02         |            | CPXRF         | 84BIS 01         |  | 2.7                 |              |            | ASV           | 74COP 01         |
| 2.70             | 0.21         |            | NAA           | 76GUZ 01         |  | 2.7                 | 0.4          |            | RTNA          | 80SLO 01         |
| 2.75             | 0.005        | 11         | AA            | 75ISA 01         |  | 2.7                 | 0.5          | 11         | ICPES         | 81MUN 01         |
| 2.8              |              |            | OES           | 75JON 11         |  | 2.74                | 0.2          |            | ASV           | 82SAT 02         |
| 2.85             |              |            | ICPES         | 81GOO 01         |  | 2.8                 | 0.2          |            | AA            | 80SCH 05         |
| 2.86             | 0.05         | 11         | AA            | 84SUZ 03         |  | 2.8                 | 0.2          |            | FAA           | 84GLA 02         |
| 2.87             | 0.005        | 11         | AA            | 75ISA 01         |  | 2.8                 | 0.2          | D          | FAA           | 80SCH 08         |
| 2.88             | 0.27         |            | ICPES         | 85LYO 01         |  | 2.9                 | 0.1          |            | FAA           | 81KNA 01         |
| 2.9              | 0.05         | 11         | AA            | 84SUZ 03         |  | 2.94                | 0.15         |            | AA            | 83RAP 01         |
| 2.91             |              |            | OES           | 75JON 05         |  | 3                   | 0.16         |            | ICPES         | 83SCH 04         |
| 2.91             | 0.08         |            | ICPES         | 85WHI 02         |  | 3.3                 | 0.2          |            | ICPES         | 79HER 01         |
| 2.92             |              |            | OES           | 75JON 09         |  |                     |              |            |               |                  |
| 2.92             | 0.08         | 6          | EXRF          | 79MAT 01         |  |                     |              |            |               |                  |
| 2.92             | 0.12         | 11         | ICPES         | 81MUN 01         |  |                     |              |            |               |                  |
| 2.93             | 0.045        |            | ICPES         | 83SCH 03         |  |                     |              |            |               |                  |
| 2.99             | 0.05         | 11         | ICPES         | 82JON 01         |  |                     |              |            |               |                  |
| 2.99             | 0.12         | 11         | ICPES         | 81MUN 01         |  |                     |              |            |               |                  |
| 3.04             | 0.05         | 11         | ICPES         | 82JON 01         |  |                     |              |            |               |                  |
| 3.08             | 0.05         | 11         | ICPES         | 82JON 01         |  |                     |              |            |               |                  |
|                  |              |            |               |                  |  | <u>Ce (ug/g)</u>    |              |            |               |                  |
|                  |              |            |               |                  |  | 1                   | 0.1          |            | RTNA          | 80SLO 01         |
|                  |              |            |               |                  |  | 1.28                | 0.18         |            | ITNA          | 86KRA 01         |
|                  |              |            |               |                  |  | 1.3                 | 0.36         |            | RTNA          | 83TJI 01         |
|                  |              |            |               |                  |  | 1.559               | 0.114        |            | RTNA          | 86TSU 01         |

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

| Conc             | Uncer  | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|--------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Cl (%)</u>    |        |     |        |           | <u>Cs (ng/g)</u> |       |     |        |           |
| 1.04             | 0.02   |     | ITNA   | 80SLO 01  | 43               | 2     |     | ITNA   | 77NAD 02  |
| 1.05             | 0.0725 |     | ITNA   | 77STE 02  | 54               | 4     |     | ITNA   | 84GLA 02  |
| 1.085            | 0.1201 |     | NAA    | 76GUZ 01  | 56               |       |     | ITNA   | 86GAU 01  |
| 1.1              | 0.07   |     | ITNA   | 77NAD 02  | 56               | 6     |     | ITNA   | 77GUZ 01  |
|                  |        |     |        |           | 58               | 4     |     | ITNA   | 84GLA 11  |
|                  |        |     |        |           | 64               | 21    |     | ITNA   | 86KRA 01  |
|                  |        |     |        |           | 70               | 8     |     | ITNA   | 85GAU 04  |
|                  |        |     |        |           | 140              | 30    |     | ITNA   | 79REN 03  |
| <u>Co (ng/g)</u> |        |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| 400              | 106    |     | NAA    | 76GUZ 01  | 3                |       |     | AA     | 81ARA 01  |
| 467              | 25     |     | ITNA   | 77GUZ 01  | 6.1              | 1.1   |     | ITNA   | 85NDI 01  |
| 495              |        |     | FAA    | 82HOE 01  | 6.9              | 0.7   |     | CPXRF  | 84BIS 01  |
| 507              | 20     |     | ITNA   | 86KRA 01  | 7.3              | 0.7   |     | XRF    | 85AVA 01  |
| 510              | 10     | 11  | FAA    | 80FUD 01  | 7.7              |       | 6   | POL    | 72SIN 01  |
| 540              | 30     |     | RTNA   | 80SLO 01  | 7.7              | 0.5   | 6   | POL    | 72SIN 01  |
| 550              | 10     | 11  | FAA    | 80FUD 01  | 8                |       |     | ICPES  | 81GOO 01  |
| 610              | 30     |     | ITNA   | 77NAD 02  | 8.2              | 0.4   | 11  | ICPES  | 82JON 01  |
| 680              | 30     |     | ITNA   | 79REN 03  | 8.7              | 1.9   |     | AA     | 84KAN 01  |
|                  |        |     |        |           | 9                |       |     | OES    | 75JON 02  |
|                  |        |     |        |           | 9.4              |       | 6   | NAA    | 72SIN 01  |
|                  |        |     |        |           | 9.4              | 0.5   | 11  | ICPES  | 81MUN 01  |
|                  |        |     |        |           | 9.5              | 0.2   | 11  | ICPES  | 82JON 01  |
|                  |        |     |        |           | 9.5              | 0.3   | 11  | ICPES  | 81MUN 01  |
|                  |        |     |        |           | 9.7              | 0.3   |     | ICPES  | 83SCH 03  |
|                  |        |     |        |           | 9.8              | 0.3   |     | ICPES  | 83SCH 04  |
|                  |        |     |        |           | 9.8              | 0.4   | 11  | ICPES  | 82JON 01  |
|                  |        |     |        |           | 10               |       |     | OES    | 75JON 03  |
|                  |        |     |        |           | 10.1             | 0.4   |     | RTNA   | 74RAV 01  |
|                  |        |     |        |           | 10.4             | 0.2   |     | ICPES  | 79HER 01  |
|                  |        |     |        |           | 10.4             | 0.5   | 11  | ICPES  | 82JON 01  |
|                  |        |     |        |           | 10.4             | 0.6   |     | VV     | 80SCH 05  |
|                  |        |     |        |           | 10.5             | 0.8   |     | RTNA   | 80SLO 01  |
|                  |        |     |        |           | 10.6             | 0.1   |     | IDMS   | 84BRO 03  |
|                  |        |     |        |           | 10.6             | 0.5   |     | AA     | 83RAP 01  |
|                  |        |     |        |           | 10.7             | 0.4   |     | ICPES  | 80SCH 08  |
|                  |        |     |        |           | 10.8             | 0.1   |     | COLOR  | 76ZAN 02  |
|                  |        |     |        |           | 10.81            | 0.02  |     | COLOR  | 77BUR 01  |
|                  |        |     |        |           | 10.9             | 0.1   | D   | AA     | 76ZAN 02  |
|                  |        |     |        |           | 10.9             | 0.1   |     | AA     | 76ZAN 01  |
|                  |        |     |        |           | 11               |       |     | FAA    | 83ATS 01  |
|                  |        |     |        |           | 11               |       |     | OES    | 75JON 04  |
|                  |        |     |        |           | 11               | 1     | 11  | AA     | 84SUZ 03  |
|                  |        |     |        |           | 11               | 1     | 6   | AF     | 83MCC 02  |
|                  |        |     |        |           | 11               | 2     | 6   | AF     | 83MCC 02  |
|                  |        |     |        |           | 11               | 2.4   |     | CPAA   | 85CAN 01  |
|                  |        |     |        |           | 11.1             | 0.2   | 7   | RTNA   | 80GAL 02  |
|                  |        |     |        |           | 11.2             |       | 11  | AA     | 79HOE 02  |
|                  |        |     |        |           | 11.2             | 0.2   |     | AA     | 85KOJ 01  |

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Cu (ug/g) cont.</u> |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| 11.5                   | 0.2   |     | AA     | 76EPS 02  | 55               |       |     | OES    | 75JON 01  |
| 12                     |       | 11  | AA     | 79HOE 02  | 162              |       |     | OES    | 75JON 09  |
| 12                     | 0.14  | 11  | AA     | 75ISA 01  | 207              | 6.3   | 11  | AA     | 84SUZ 03  |
| 12                     | 0.17  | 11  | AA     | 75ISA 01  | 220              |       |     | AA     | 81ARA 01  |
| 12.2                   | 1.3   | 6   | EXRF   | 79MAT 01  | 266              |       |     | OES    | 75JON 06  |
| 13                     |       |     | OES    | 75JON 10  | 267              |       |     | OES    | 75JON 03  |
| 13                     | 0.7   | 11  | AA     | 84SUZ 03  | 340              |       |     | OES    | 75JON 02  |
| 13.5                   | 0.4   |     | AA     | 77GUZ 01  | 342              |       |     | OES    | 75JON 04  |
| 14.1                   | 1.3   |     | ITNA   | 77GUZ 01  | 350              |       |     | OES    | 75JON 11  |
| 14.1                   | 5.64  |     | NAA    | 76GUZ 01  | 361              | 50    | 11  | ICPES  | 81MUN 01  |
| 15                     |       |     | OES    | 75JON 09  | 379              |       |     | OES    | 75JON 08  |
| 15                     |       |     | OES    | 75JON 01  | 442              | 115   | 11  | AA     | 75ISA 01  |
| 15                     |       |     | OES    | 75JON 11  | 450              | 17    | 11  | AA     | 84SUZ 03  |
| 15                     |       |     | OES    | 75JON 06  | 463              | 157   | 11  | AA     | 75ISA 01  |
| 15                     | 3     |     | AA     | 86GAU 01  | 469.25           | 118.3 |     | NAA    | 76GUZ 01  |
| 17                     |       |     | OES    | 75JON 05  | 478              |       |     | OES    | 75JON 05  |
| 17                     |       |     | OES    | 75JON 08  | 507.6            | 14.3  |     | ITNA   | 77GUZ 01  |
| 20                     |       |     | OES    | 75JON 07  | 531              | 14    | 11  | ICPES  | 82JON 01  |
| 25                     |       |     | EXRF   | 81PAR 01  | 534              |       |     | OES    | 75JON 10  |
|                        |       |     |        |           | 546              | 19    |     | ICPES  | 83SCH 03  |
|                        |       |     |        |           | 550              | 36    |     | CPXRF  | 84BIS 01  |
|                        |       |     |        |           | 552              |       |     | OES    | 75JON 07  |
|                        |       |     |        |           | 568              | 3     |     | ICPES  | 79HER 01  |
|                        |       |     |        |           | 575              | 10    | 11  | COLOR  | 82SCH 03  |
|                        |       |     |        |           | 597              |       | 11  | COLOR  | 82SCH 03  |
|                        |       |     |        |           | 602              | 28    | 6   | FAA    | 84FUD 02  |
|                        |       |     |        |           | 604              | 11    | 11  | COLOR  | 82SCH 03  |
|                        |       |     |        |           | 614              | 14    | 6   | AF     | 83MCC 02  |
|                        |       |     |        |           | 623              | 10    | 6   | EXRF   | 79MAT 01  |
|                        |       |     |        |           | 625              | 14    | 11  | ICPES  | 82JON 01  |
|                        |       |     |        |           | 632              |       |     | ICPES  | 81GOO 01  |
|                        |       |     |        |           | 636              | 65    |     | ICPES  | 85LYO 01  |
|                        |       |     |        |           | 642              | 17    | 11  | ICPES  | 82JON 01  |
|                        |       |     |        |           | 657              |       |     | ICPES  | 84NAD 01  |
|                        |       |     |        |           | 658              | 18    | 11  | ICPES  | 82JON 01  |
|                        |       |     |        |           | 661              | 14    |     | ITNA   | 77NAD 02  |
|                        |       |     |        |           | 665              |       | 11  | AA     | 79HOE 02  |
|                        |       |     |        |           | 668              | 25    | 11  | ICPES  | 81MUN 01  |
|                        |       |     |        |           | 670              | 50    | 35  | ITNA   | 81GLA 03  |
|                        |       |     |        |           | 672              |       | 11  | AA     | 79HOE 02  |
|                        |       |     |        |           | 674              | 97    |     | ITNA   | 86KRA 01  |
|                        |       |     |        |           | 675.8            | 18.9  |     | CPAA   | 85CAN 01  |
|                        |       |     |        |           | 684              | 9     | 6   | FAA    | 84FUD 02  |
|                        |       |     |        |           | 685              | 20    | D   | ICPES  | 80SCH 08  |
|                        |       |     |        |           | 685              | 20    |     | ICPES  | 80SCH 05  |
|                        |       |     |        |           | 685              | 50    | 6   | AF     | 83MCC 02  |
|                        |       |     |        |           | 698              |       |     | VOLT   | 81SZY 01  |
|                        |       |     |        |           | 705              | 30    |     | AA     | 83RAP 01  |
|                        |       |     |        |           | 706              | 12    |     | ITNA   | 79DAS 01  |
|                        |       |     |        |           | 706              | 12    |     | RTNA   | 80SLO 01  |
|                        |       |     |        |           | 730              | 90    |     | ITNA   | 79REN 03  |
|                        |       |     |        |           | 831              | 10    | 6   | EXRF   | 79MAT 01  |
|                        |       |     |        |           | 1170             |       |     | EXRF   | 81PAR 01  |

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

| Conc                  | Uncer | Com | Method | Reference | Conc             | Uncer  | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|------------------|--------|-----|--------|-----------|
| <u>Fe(II) (ug/g)</u>  |       |     |        |           | <u>K (%)</u>     |        |     |        |           |
| 540                   |       |     | VOLT   | 81SZY 01  | 2.68             | 0.26   | 11  | ICPES  | 81MUN 01  |
|                       |       |     |        |           | 2.9              |        |     | ICPES  | 84NAD 01  |
| <u>Fe(III) (ug/g)</u> |       |     |        |           | 3                | 0.29   |     | ICPES  | 79HER 01  |
| 158                   |       |     | VOLT   | 81SZY 01  | 3.8              |        |     | OES    | 75JON 02  |
|                       |       |     |        |           | 3.81             |        |     | OES    | 75JON 10  |
|                       |       |     |        |           | 3.85             |        |     | OES    | 75JON 07  |
| <u>Ga (ng/g)</u>      |       |     |        |           | 4.055            |        | 1   | AA     | 78SZY 01  |
| 69.3                  | 67    |     | NAA    | 76GUZ 01  | 4.15             | 0.08   |     | ITNA   | 79REN 03  |
| 83                    |       |     | FAA    | 85XIA 01  | 4.17             |        | 1   | AA     | 78SZY 01  |
|                       |       |     |        |           | 4.18             | 0.4    |     | ITNA   | 86KRA 01  |
|                       |       |     |        |           | 4.25             |        |     | OES    | 75JON 04  |
| <u>Gd (ng/g)</u>      |       |     |        |           | 4.3              | 0.2    | 11  | ICPES  | 82JON 01  |
| 74                    | 15    |     | RTNA   | 83TJI 01  | 4.33             |        |     | OES    | 75JON 08  |
| 76                    | 5     |     | RTNA   | 86TSU 01  | 4.34             | 0.18   |     | ICPES  | 85WHI 02  |
|                       |       |     |        |           | 4.34             | 0.23   | 11  | ICPES  | 81MUN 01  |
|                       |       |     |        |           | 4.39             | 0.09   |     | CPXRF  | 84BIS 01  |
| <u>H (%)</u>          |       |     |        |           | 4.4              | 0.1    | 11  | ICPES  | 82JON 01  |
| 5                     | 0.1   | 35  | TCGS   | 79GLA 04  | 4.4              | 0.2    | 11  | ICPES  | 82JON 01  |
| 5.1                   | 0.2   |     | CB     | 82GLA 02  | 4.4272           | 0.2816 |     | NAA    | 76GUZ 01  |
| 5.14                  | 0.07  |     | CB     | 80SCH 02  | 4.47             | 0.15   |     | ITNA   | 80SLO 01  |
|                       |       |     |        |           | 4.47             | 0.24   |     | ITNA   | 77NAD 02  |
|                       |       |     |        |           | 4.49             |        |     | ICPES  | 79COO 01  |
| <u>Hf (ng/g)</u>      |       |     |        |           | 4.51             |        |     | OES    | 75JON 09  |
| 250                   | 20    |     | ITNA   | 86KRA 01  | 4.58             |        |     | OES    | 75JON 03  |
|                       |       |     |        |           | 4.58             | 0.0046 | 11  | AA     | 75ISA 01  |
|                       |       |     |        |           | 4.6              |        |     | OES    | 75JON 06  |
| <u>Hg (ng/g)</u>      |       |     |        |           | 4.6              | 0.0083 | 11  | AA     | 75ISA 01  |
| 90                    | 8     |     | ITNA   | 77NAD 02  | 4.6              | 0.2    | 11  | ICPES  | 82JON 01  |
| 91                    | 11    |     | CVAA   | 82GLA 02  | 4.73             | 0.14   | 11  | AA     | 84SUZ 03  |
| 128                   | 118   |     | NAA    | 76GUZ 01  | 4.74             |        |     | OES    | 75JON 05  |
|                       |       |     |        |           | 4.79             | 0.06   | 6   | EXRF   | 79MAT 01  |
|                       |       |     |        |           | 4.8              |        |     | OES    | 75JON 11  |
| <u>Ho (ng/g)</u>      |       |     |        |           | 4.81             | 0.09   | 11  | AA     | 84SUZ 03  |
| 13                    | 1     |     | RTNA   | 86TSU 01  | 5.16             | 0.06   | 6   | EXRF   | 79MAT 01  |
|                       |       |     |        |           | 5.72             |        |     | OES    | 75JON 01  |
|                       |       |     |        |           | 9.24             |        |     | EXRF   | 81PAR 01  |
| <u>I (ng/g)</u>       |       |     |        |           | <u>La (ng/g)</u> |        |     |        |           |
| 280                   | 30    |     | IENA   | 82SAT 01  | 346              | 79     |     | NAA    | 76GUZ 01  |
| 300                   | 100   |     | PAA    | 77WIL 01  | 630              | 90     |     | ITNA   | 86KRA 01  |
| 390                   | 120   |     | RTNA   | 77STE 02  | 640              | 40     |     | ITNA   | 77NAD 02  |
|                       |       |     |        |           | 677              | 13     |     | RTNA   | 86TSU 01  |
|                       |       |     |        |           | 766              | 199    |     | RTNA   | 83TJI 01  |
|                       |       |     |        |           | 770              | 110    |     | RTNA   | 80SLO 01  |
| 0.96                  | 0.08  |     | RTNA   | 74RAV 01  | 800              | 200    |     | ITNA   | 79REN 03  |

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Lu (ng/g)</u> |       |     |        |           | <u>Mn (ug/g) cont.</u> |       |     |        |           |
| 7                | 1     |     | RTNA   | 83TJI 01  | 215                    | 27    |     | FAA    | 84KUR 01  |
| 9                | 1     |     | RTNA   | 85TSU 01  | 216                    | 17    | 11  | AA     | 75ISA 01  |
| 12               | 2     |     | RTNA   | 80SLO 01  | 217                    |       | 11  | AA     | 79HOE 02  |
| <u>Mg (ug/g)</u> |       |     |        |           | 217                    | 5     | 11  | ICPES  | 82JON 01  |
| 5365             |       |     | ICPES  | 81GOO 01  | 217                    | 16    | 11  | ICPES  | 81MUN 01  |
| 6000             |       |     | OES    | 75JON 08  | 218                    | 13    | 11  | AA     | 75ISA 01  |
| 6000             | 600   |     | ITNA   | 80SLO 01  | 219                    | 7     |     | ICPES  | 85WHI 02  |
| 6100             | 600   |     | ICPES  | 79HER 01  | 221                    | 5     | 11  | ICPES  | 82JON 01  |
| 6300             |       |     | OES    | 75JON 09  | 222                    | 5     | 11  | ICPES  | 82JON 01  |
| 6400             | 400   |     | ICPES  | 85LYO 01  | 223                    |       | 11  | AA     | 79HOE 02  |
| 6500             | 300   |     | ICPES  | 85WHI 02  | 223                    | 7     | 6   | EXRF   | 79MAT 01  |
| 6600             |       |     | OES    | 75JON 07  | 224                    | 2.6   | 11  | AA     | 84SUZ 03  |
| 6672             | 186   | 11  | ICPES  | 81MUN 01  | 225.6                  | 17    |     | ICPES  | 85LYO 01  |
| 6700             | 3     | 11  | AA     | 75ISA 01  | 227                    |       |     | OES    | 75JON 05  |
| 6700             | 3     | 11  | AA     | 75ISA 01  | 227                    | 7     | 6   | AF     | 83MCC 02  |
| 6700             | 200   | 11  | ICPES  | 82JON 01  | 230                    |       |     | OES    | 75JON 03  |
| 6784             | 206   | 11  | ICPES  | 81MUN 01  | 230                    | 5     | 11  | ICPES  | 82JON 01  |
| 6800             |       |     | ICPES  | 84NAD 01  | 230                    | 9     | 6   | AF     | 83MCC 02  |
| 6800             |       |     | OES    | 75JON 10  | 231                    | 3.6   | 11  | AA     | 84SUZ 03  |
| 6800             | 90    |     | ICPES  | 83SCH 03  | 231                    | 8     | 11  | ICPES  | 81MUN 01  |
| 6900             |       |     | OES    | 75JON 04  | 231                    | 10    |     | ITNA   | 80SLO 01  |
| 6900             | 200   | 11  | ICPES  | 82JON 01  | 232                    |       |     | ICPES  | 84NAD 01  |
| 6900             | 200   | 11  | ICPES  | 82JON 01  | 233                    | 13    |     | ICPES  | 83SCH 03  |
| 7000             |       |     | OES    | 75JON 03  | 234                    | 5     |     | VV     | 80SCH 05  |
| 7000             | 100   | 11  | AA     | 84SUZ 03  | 234                    | 5     | D   | ICPES  | 80SCH 08  |
| 7000             | 200   | 11  | AA     | 84SUZ 03  | 235                    | 2     |     | NM     | 84SUZ 01  |
| 7000             | 200   | 11  | ICPES  | 82JON 01  | 235                    | 4     | 6   | FAA    | 84FUD 02  |
| 7100             |       |     | OES    | 75JON 02  | 235                    | 5     |     | ICPES  | 79HER 01  |
| 7300             | 100   |     | ITNA   | 77NAD 02  | 236                    | 5     | 6   | FAA    | 84FUD 02  |
| 7400             |       |     | OES    | 75JON 05  | 238                    | 17    |     | ITNA   | 77NAD 02  |
| 7400             |       |     | OES    | 75JON 06  | 240                    | 4     |     | ICPES  | 83SCH 04  |
| 7400             |       |     | OES    | 75JON 11  | 241                    |       |     | OES    | 75JON 08  |
| 7800             |       |     | OES    | 75JON 01  | 241                    | 12    |     | AA     | 83RAP 01  |
| <u>Mn (ug/g)</u> |       |     |        |           | 251                    |       |     | OES    | 75JON 01  |
| 138              |       |     | OES    | 75JON 07  | 252                    |       |     | ICPES  | 81GOO 01  |
| 189              |       |     | OES    | 75JON 10  | 266                    |       |     | ITNA   | 82GLA 02  |
| 189              |       |     | OES    | 75JON 04  | 266                    | 8     | 6   | EXRF   | 79MAT 01  |
| 197              |       |     | OES    | 75JON 09  | 414                    |       |     | EXRF   | 81PAR 01  |
| 198              |       |     | OES    | 75JON 06  | <u>Mo (ug/g)</u>       |       |     |        |           |
| 200              |       |     | ITNA   | 79REN 03  | 0.4                    | 0.2   | 11  | ICPES  | 82JON 01  |
| 200              | 9     |     | CPXRF  | 84BIS 01  | 0.5                    | 0.1   | 11  | ICPES  | 82JON 01  |
| 209.18           | 9.93  |     | NAA    | 76GUZ 01  | 0.5                    | 0.1   | 11  | ICPES  | 82JON 01  |
| 209.2            | 11.9  |     | ITNA   | 77GUZ 01  | 0.5                    | 0.3   | 11  | ICPES  | 82JON 01  |
| 210              |       |     | OES    | 75JON 02  | 0.62                   | 0.04  |     | ITNA   | 77NAD 02  |
| 211.1            | 2.1   |     | AA     | 77GUZ 01  | 0.65                   | 0.1   |     | RTNA   | 80SLO 01  |
| 215              |       |     | OES    | 75JON 11  | 2.8                    |       |     | OES    | 75JON 10  |
|                  |       |     |        |           | 4.2                    |       |     | OES    | 75JON 11  |
|                  |       |     |        |           | 4.5                    |       |     | OES    | 75JON 03  |
|                  |       |     |        |           | 11.7                   |       |     | OES    | 75JON 01  |
|                  |       |     |        |           | 14.6                   |       |     | OES    | 75JON 07  |
|                  |       |     |        |           | 17.9                   |       |     | OES    | 75JON 02  |

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>N (%)</u>     |       |     |        |           | <u>P (ug/g)</u>  |       |     |        |           |
| 4.9              | 0.2   | 35  | TCGS   | 79GLA 04  | 2400             |       |     | OES    | 75JON 04  |
| 4.94             | 0.11  |     | CB     | 80SCH 02  | 2700             |       |     | ICPES  | 84NAD 01  |
| 4.95             | 0.08  |     | CB     | 82GLA 02  | 2800             |       |     | OES    | 75JON 10  |
| <u>Na (ug/g)</u> |       |     |        |           | 3030             |       |     | ICPES  | 81GOO 01  |
| 326              | 18    | 11  | ICPES  | 81MUN 01  | 3100             |       |     | OES    | 75JON 07  |
| 332              | 4.9   | 11  | AA     | 84SUZ 03  | 3200             | 200   | 6   | FAA    | 81LAN 01  |
| 337              | 13    | 11  | ICPES  | 81MUN 01  | 3263             | 130   | 11  | ICPES  | 81MUN 01  |
| 337              | 23    | 11  | AA     | 84SUZ 03  | 3300             |       |     | OES    | 75JON 09  |
| 350              |       |     | OES    | 75JON 04  | 3300             |       |     | OES    | 75JON 11  |
| 369              | 16    |     | ICPES  | 85WHI 02  | 3300             |       |     | OES    | 75JON 06  |
| 388              |       |     | OES    | 75JON 02  | 3300             | 200   | 6   | FAA    | 81LAN 01  |
| 459              | 46.1  |     | NAA    | 76GUZ 01  | 3300             | 200   |     | ICPES  | 85WHI 02  |
| 475              | 25    |     | ITNA   | 80SLO 01  | 3318             | 106   | 11  | ICPES  | 81MUN 01  |
| 488              |       | 1   | AA     | 78SZY 01  | 3320             | 160   |     | ICPES  | 81OWE 01  |
| 500              | 200   |     | ITNA   | 79REN 03  | 3400             |       |     | OES    | 75JON 03  |
| 520              |       |     | ICPES  | 81GOO 01  | 3400             |       |     | FAA    | 79EDI 01  |
| 522              | 13    |     | ITNA   | 77NAD 02  | 3400             |       |     | ICPES  | 79EDI 01  |
| 531              |       |     | OES    | 75JON 08  | 3400             | 100   | 11  | ICPES  | 82JON 01  |
| 568              |       |     | ICPES  | 84NAD 01  | 3400             | 200   |     | CPAA   | 83MAS 02  |
| 602              |       | 1   | AA     | 78SZY 01  | 3420             | 89.5  |     | NAA    | 76GUZ 01  |
| 610              |       |     | OES    | 75JON 06  | 3459             | 8     |     | ICPES  | 84PRI 01  |
| 618              | 18    |     | ITNA   | 86KRA 01  | 3500             | 100   | 11  | ICPES  | 82JON 01  |
| 650              |       |     | OES    | 75JON 03  | 3500             | 100   | 11  | ICPES  | 82JON 01  |
| 800              |       |     | OES    | 75JON 01  | 3500             | 100   | 11  | ICPES  | 82JON 01  |
| 820              |       |     | OES    | 75JON 09  | 3500             | 200   | 6   | FAA    | 81LAN 01  |
| 950              |       |     | OES    | 75JON 05  | 3700             | 100   |     | ICPES  | 79HER 01  |
| 1090             | 70    |     | ITNA   | 82SCH 05  | 3800             |       |     | OES    | 75JON 02  |
| 1600             |       |     | OES    | 75JON 11  | 3900             | 200   |     | ICPES  | 85LYO 01  |
| <u>Nd (ng/g)</u> |       |     |        |           | 5000             |       |     | OES    | 75JON 01  |
| 566              | 59    |     | RTNA   | 86YSU 01  | <u>Pb (ug/g)</u> |       |     |        |           |
| 580              | 140   |     | RTNA   | 83TJI 01  | 3.2              |       | 6   | POL    | 72SIN 01  |
| 700              | 100   |     | RTNA   | 80SLO 01  | 4                |       |     | ASV    | 74COP 01  |
| <u>Ni (ug/g)</u> |       |     |        |           | 4.3              | 0.2   | 11  | ICPES  | 82JON 01  |
| <                | 1.5   | 11  | ICPES  | 81MUN 01  | 4.5              | 0.1   | 6   | POL    | 72SIN 01  |
| 0.3              | 0.2   |     | RTNA   | 80SLO 01  | 4.9              |       | 11  | FAA    | 80PRE 01  |
| 1.1              | 0.08  | 11  | ICPES  | 82JON 01  | 5.0              | 0.2   | 11  | ICPES  | 82JON 01  |
| 1.12             | 0.06  | 11  | ICPES  | 82JON 01  | 5.2              | 0.8   |     | AA     | 84KAN 01  |
| 1.12             | 0.08  | 11  | ICPES  | 82JON 01  | 5.4              |       | 6   | FAA    | 81JAC 01  |
| 1.2              | 0.3   |     | ITNA   | 77NAD 02  | 5.5              |       | 11  | FAA    | 79HOE 02  |
| 1.3              | 0.2   | 11  | ICPES  | 82JON 01  | 5.5              | 0.4   |     | FAA    | 80LEG 01  |
| 1.5              | 0.8   | 11  | ICPES  | 81MUN 01  | 5.6              |       | 6   | FAA    | 81JAC 01  |
| 1.7              | 0.4   |     | ICPES  | 83SCH 03  | 5.6              | 0.2   |     | ASV    | 82SAT 02  |
| 5.9              | 0.6   |     | ICPES  | 79HER 01  | 5.7              |       | 11  | FAA    | 79HOE 02  |
|                  |       |     |        |           | 5.8              |       | 6   | FAA    | 81HIN 01  |
|                  |       |     |        |           | 5.8              |       | 6   | FAA    | 82KOI 01  |
|                  |       |     |        |           | 5.8              |       | 6   | FAA    | 81HIN 01  |

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Pb (ug/g) cont.</u> |       |     |        |           | <u>S (ug/g)</u>  |       |     |        |           |
| 5.8                    |       | 6   | FAA    | 82KOI 01  | 5500             | 300   |     | CB     | 84GLA 11  |
| 5.8                    | 0.8   |     | HAA    | 82WEI 01  | 5848             | 58    |     | ICPES  | 84PRI 01  |
| 5.9                    |       | 11  | FAA    | 80PRE 01  | 5860             | 270   |     | CB     | 86BOW 01  |
| 5.9                    | 0.5   |     | XRF    | 85AVA 01  | 5960             | 150   |     | WXRF   | 86BOW 01  |
| 5.95                   | 0.06  |     | FAA    | 79DAB 02  | 6260             |       | D   | CB     | 85JAC 01  |
| 6                      |       |     | FAA    | 82HOE 01  | 6260             | 100   | 6   | CB     | 84JAC 01  |
| 6                      |       | 11  | FAA    | 80PRE 01  | 6360             | 190   |     | CB     | 86GAU 01  |
| 6                      |       |     | ASV    | 82GAJ 01  | 6550             |       | D   | CB     | 85JAC 01  |
| 6.0                    | 0.5   |     | FAA    | 84GLA 11  | 6550             | 90    | 6   | CB     | 84JAC 01  |
| 6.03                   | 0.15  |     | IDMS   | 83BRO 01  | 6900             | 300   |     | ICPES  | 85WHI 02  |
| 6.1                    |       |     | FAA    | 83HOE 01  | <u>Sb (ng/g)</u> |       |     |        |           |
| 6.1                    |       | 11  | FAA    | 79HOE 02  |                  |       |     |        |           |
| 6.1                    | 0.3   |     | AA     | 80SCH 05  | 30               | 1     |     | RTNA   | 79HOE 01  |
| 6.1                    | 0.3   | D   | FAA    | 80SCH 08  | 30               | 2     |     | RTNA   | 80KOS 02  |
| 6.2                    |       |     | FAA    | 80PRE 01  | 34               |       |     | HAA    | 82KUE 03  |
| 6.2                    | 0.3   |     | FAA    | 81KNA 01  | 40               | 2     |     | ITNA   | 77NAD 02  |
| 6.23                   | 0.97  |     | CPAA   | 85CAN 01  | 46               | 20    |     | ITNA   | 86KRA 01  |
| 6.3                    |       | 11  | FAA    | 80PRE 01  | 120              | 30    | 7   | RTNA   | 80GAL 02  |
| 6.3                    | 0.5   |     | ICPES  | 83SCH 03  | 120              | 50    |     | ITNA   | 79REN 03  |
| 6.4                    | 0.1   |     | AA     | 83RAP 01  | <u>Sc (ng/g)</u> |       |     |        |           |
| 6.4                    | 0.3   |     | FAA    | 82ATS 02  | 138              | 7     |     | ITNA   | 77GUZ 01  |
| 6.55                   | 0.22  |     | ASV    | 80SZY 01  | 151              | 4     |     | ITNA   | 84GLA 11  |
| 6.6                    |       |     | FAA    | 82PRE 01  | 160              | 30    |     | ITNA   | 79REN 03  |
| 7.1                    | 0.9   |     | FAA    | 82WEI 01  | 164              | 16    |     | ITNA   | 86GAU 01  |
| 7.5                    |       | 11  | FAA    | 80PRE 01  | 170              | 3     |     | ITNA   | 77NAD 02  |
| 7.6                    | 3.1   |     | FAA    | 85GAU 04  | 175              | 1     |     | ITNA   | 85GAU 04  |
| 8.1                    | 1.8   | 11  | ICPES  | 81MUN 01  | 175              | 4     |     | ITNA   | 86KRA 01  |
| 8.3                    | 1.1   |     | ICPES  | 79HER 01  | 208              | 89    |     | NAA    | 76GUZ 01  |
| 9.1                    | 2.9   | 11  | ICPES  | 81MUN 01  | 220              | 30    |     | RTNA   | 80SLO 01  |
| 15                     |       |     | EXRF   | 81PAR 01  | <u>Se (ng/g)</u> |       |     |        |           |
| <u>Pd (ng/g)</u>       |       |     |        |           | 49               | 5     |     | ITNA   | 77NAD 02  |
| <                      | 2     |     | RTNA   | 85BEM 01  | 50               | 20    |     | RTNA   | 80KNA 01  |
| <u>Pr (ng/g)</u>       |       |     |        |           | 57               | 3     | 11  | GC     | 81UCH 02  |
| 184                    | 11    |     | RTNA   | 86TSU 01  | 61               | 2     | 11  | GC     | 81UCH 02  |
| 190                    | 40    |     | RTNA   | 80SLO 01  | 84               | 15    | 9   | ITNA   | 80WAN 01  |
| <u>Rb (ug/g)</u>       |       |     |        |           | <u>Si (ug/g)</u> |       |     |        |           |
| 15.16                  | 1.35  |     | NAA    | 76GUZ 01  | 3000             |       |     | ICPES  | 84NAD 01  |
| 15.21                  | 2.3   |     | ITNA   | 79REN 03  | <u>Sm (ng/g)</u> |       |     |        |           |
| 16.4                   | 0.5   |     | ITNA   | 77GUZ 01  | 81               | 3     |     | RTNA   | 86TSU 01  |
| 16.5                   | 0.7   |     | ITNA   | 77NAD 02  | 86               | 27    |     | RTNA   | 83TJI 01  |
| 16.8                   | 0.9   |     | ITNA   | 86KRA 01  | 110              | 15    |     | RTNA   | 80SLO 01  |
| 19.2                   | 1.8   |     | CPXRF  | 84BIS 01  | 200              | 90    |     | ITNA   | 79REN 03  |
| 22                     | 3     | 35  | ITNA   | 81GLA 03  |                  |       |     |        |           |
| 40                     |       |     | EXRF   | 81PAR 01  |                  |       |     |        |           |

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sr (ug/g)</u> |       |     |        |           | <u>V (ug/g)</u>  |       |     |        |           |
| 35.6             | 1.4   |     | IENA   | 85GAU 04  | 0.31             | 0.045 | 11  | RTNA   | 82HEY 02  |
| 36               | 0.6   |     | ICPES  | 79HER 01  | 0.87             | 0.013 | 11  | RTNA   | 82HEY 02  |
| 38               |       |     | OES    | 75JON 04  | 0.888            | 0.013 | 11  | RTNA   | 82HEY 02  |
| 38               |       |     | OES    | 75JON 03  | 1.19             | 0.01  | 11  | ICPES  | 82JON 01  |
| 42.2             | 0.8   |     | AA     | 86GAU 01  | 1.27             | 0.035 |     | RTNA   | 78BYR 01  |
| 42.9             | 0.5   |     | CPAA   | 85CAN 01  | 1.297            | 0.112 |     | ITNA   | 82HEY 02  |
| 43.7             | 0.2   |     | AA     | 85GAU 04  | 1.3              | 0.2   |     | ITNA   | 77NAD 02  |
| 44               | 2     |     | CPXRF  | 84BIS 01  | 1.42             | 0.08  | 11  | ICPES  | 82JON 01  |
| 44.8             | 0.5   |     | CPAA   | 85MAS 01  | 1.5              | 0.2   |     | ICPES  | 83SCH 03  |
| 45               | 1     |     | ITNA   | 77NAD 02  |                  |       |     |        |           |
| 45.3             | 0.4   |     | IDNAA  | 85YAG 01  |                  |       |     |        |           |
| 54               |       |     | OES    | 75JON 01  |                  |       |     |        |           |
| 65.5             | 5.84  |     | NAA    | 76GUZ 01  | <                | 40    | L   | RTNA   | 80SLO 01  |
| 102              |       |     | EXRF   | 81PAR 01  |                  |       |     |        |           |
| <u>Ta (ng/g)</u> |       |     |        |           | <u>W (ng/g)</u>  |       |     |        |           |
| 430              | 300   |     | ITNA   | 79REN 03  | 47               | 10    |     | RTNA   | 83TJI 01  |
|                  |       |     |        |           | 63               | 4     |     | RTNA   | 86TSU 01  |
|                  |       |     |        |           | 80               | 20    |     | RTNA   | 80SLO 01  |
| <u>Tb (ng/g)</u> |       |     |        |           | <u>Yb (ng/g)</u> |       |     |        |           |
| 4                | 1     |     | RTNA   | 80SLO 01  |                  |       |     |        |           |
| 12               | 2     |     | RTNA   | 86TSU 01  |                  |       |     | OES    | 75JON 09  |
| 12               | 4     |     | RTNA   | 83TJI 01  |                  |       |     | ASV    | 74COP 01  |
| <u>Th (ng/g)</u> |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 26               |       |     |        |           |
|                  |       |     |        |           | 29               |       |     | OES    | 75JON 10  |
|                  |       |     |        |           | 48               |       |     | OES    | 75JON 03  |
|                  |       |     |        |           | 50               |       |     | OES    | 75JON 03  |
| 190              | 20    |     | ITNA   | 77NAD 02  | 52               | 1     | 11  | ICPES  | 82JON 01  |
| 220              | 30    |     | RTNA   | 80SLO 01  | 53               |       |     | FAA    | 83ATS 01  |
|                  |       |     |        |           | 54               | 4     |     | RTNA   | 80SLO 01  |
|                  |       |     |        |           | 55               | 3     |     | XRF    | 85AVA 01  |
|                  |       |     |        |           | 56               | 2     | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 56.8             | 7.3   |     | ICPES  | 85LYO 01  |
|                  |       |     |        |           | 57               | 2     | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 58               |       |     | OES    | 75JON 01  |
|                  |       |     |        |           | 58               |       |     | OES    | 75JON 06  |
|                  |       |     |        |           | 58               | 1.5   | 11  | AA     | 84SUZ 03  |
|                  |       |     |        |           | 58               | 4     | 6   | AF     | 83MCC 02  |
|                  |       |     |        |           | 58.03            | 3.33  |     | NAA    | 76GUZ 01  |
|                  |       |     |        |           | 58.9             |       | 11  | AA     | 79HOE 02  |
|                  |       |     |        |           | 59               |       |     | ICPES  | 81GOO 01  |
|                  |       |     |        |           | 59               |       |     | OES    | 75JON 11  |
|                  |       |     |        |           | 59               | 2     | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 59               | 3     | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 59               | 3     |     | AA     | 83RAP 01  |
|                  |       |     |        |           | 59.5             | 2.2   |     | ICPES  | 83SCH 03  |
|                  |       |     |        |           | 60               |       |     | OES    | 75JON 02  |
|                  |       |     |        |           | 60               | 2     | 6   | AF     | 83MCC 02  |
|                  |       |     |        |           | 60               | 3     | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 61               |       | 6   | AA     | 72SIN 01  |
|                  |       |     |        |           | 61               | 3     |     | ICPES  | 85WHI 02  |
| <u>Ti (ug/g)</u> |       |     |        |           | <u>U (ng/g)</u>  |       |     |        |           |
| 12.6             | 1     |     | ICPES  | 83SCH 03  | 20               | 20    |     | RTNA   | 80SLO 01  |
| 68               | 9     |     | ITNA   | 77NAD 02  | 50.2             | 2.3   |     | RTNA   | 78DER 01  |
| 89               | 8     |     | COLOR  | 84GLA 11  | 54               |       |     | DNA    | 84GLA 02  |
| <u>Tl (ng/g)</u> |       |     |        |           | <u>U (ng/g)</u>  |       |     |        |           |
| 20               |       | 11  | ASV    | 84LIE 01  | 60               | 120   | R*  | DNA    | 81GLA 03  |
| 24               |       | 11  | ASV    | 84LIE 01  | 63               | 3     | 35  | DNA    | 80GLA 04  |
|                  |       |     |        |           | 63               | 4     |     | DNA    | 86GAU 01  |
|                  |       |     |        |           | 63               | 6     |     | DNA    | 85GAU 04  |

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

| Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g) cont.</u> |       |     |        |           |
| 62                     | 3     | 11  | ICPES  | 82JON 01  |
| 62                     | 4     |     | ITNA   | 77NAD 02  |
| 62                     | 4.6   |     | ITNA   | 79REN 03  |
| 62.5                   |       |     | AA     | 81ARA 01  |
| 62.5                   | 1.2   |     | CPAA   | 85CAN 01  |
| 62.9                   |       | 6   | POL    | 72SIN 01  |
| 62.9                   | 1.7   | 6   | POL    | 72SIN 01  |
| 63                     | 2.5   | 11  | AA     | 75ISA 01  |
| 63.5                   | 1.5   | 11  | ICPES  | 81MUN 01  |
| 64                     | 3     | 11  | ICPES  | 82JON 01  |
| 65                     |       |     | OES    | 75JON 07  |
| 65                     |       |     | OES    | 75JON 05  |
| 65                     | 3.25  | 11  | AA     | 75ISA 01  |
| 65                     | 7     |     | ICPES  | 80SCH 05  |
| 65                     | 7     | D   | ICPES  | 80SCH 08  |
| 66                     | 2.2   | 11  | AA     | 84SUZ 03  |
| 66.4                   | 8     |     | CPXRF  | 84BIS 01  |
| 66.6                   | 4.6   | 11  | ICPES  | 81MUN 01  |
| 68                     |       | 11  | AA     | 79HOE 02  |
| 68                     |       |     | FAA    | 83ATS 01  |
| 68.5                   | 1.7   |     | ITNA   | 86KRA 01  |
| 71                     | 2     |     | ICPES  | 83SCH 04  |
| 72.8                   | 2     | 6   | EXRF   | 79MAT 01  |
| 73                     | 3     |     | ICPES  | 79HER 01  |
| 75                     |       |     | OES    | 75JON 08  |
| 78                     | 2.1   | 6   | EXRF   | 79MAT 01  |
| 86                     |       |     | OES    | 75JON 04  |
| 124                    |       |     | EXRF   | 81PAR 01  |

TABLE 1575-1: COMPILED DATA FOR NBS SRM 1575 PINE NEEDLES (revised 3/1/86)

| ELE  | UNITS | NBS        |      | CONSENSUS    |      | MEDIAN | RANGE        | AA        |      | NAA         |      | ICPES      |           | OTHER METHODS |           |        |
|------|-------|------------|------|--------------|------|--------|--------------|-----------|------|-------------|------|------------|-----------|---------------|-----------|--------|
|      |       | Mean ± SD  | (n)  | Mean ± SD    | (n)  |        |              | Mean ± SD | (n)  | Mean ± SD   | (n)  | Method     | Mean ± SD | (n)           | Method    |        |
| Ag   | ng/g  | ---        | (1)  | 150          | (1)  | ---    | ---          | ---       | 150  | (1)         | ---  | ---        | ---       | ---           | ---       |        |
| Al   | ug/g  | 545 ± 30   | (24) | 510 ± 60     | (6)  | 521    | 399 - 620    | 558 ± 26  | (3)  | 600 ± 80    | (6)  | 500 ± 60   | (7)       | 658           | (2) XRF   |        |
| Al   | ug/g  | ---        | ---  | ---          | ---  | ---    | ---          | ---       | ---  | ---         | ---  | ---        | ---       | 452.7         | (2) COLOR |        |
| As   | ng/g  | 210 ± 40   | (22) | 207 ± 18     | (9)  | 200    | 180 - 240    | 205 ± 17  | (11) | 212 ± 20    | (2)  | 193        | (1)       | ---           | ---       |        |
| Au   | ng/g  | ---        | (2)  | 0.6          | (2)  | ---    | 0.3 - 0.9    | ---       | ---  | 0.6         | (2)  | ---        | ---       | ---           | ---       |        |
| B    | ug/g  | ---        | (18) | 17 ± 2       | (1)  | 17     | 13 - 20      | ---       | ---  | 16          | (1)  | 16 ± 2     | (4)       | ---           | ---       |        |
| B    | ug/g  | ---        | ---  | ---          | ---  | ---    | ---          | ---       | ---  | ---         | ---  | ---        | ---       | 17 ± 3        | (10) OES  |        |
| Ba   | ug/g  | ---        | (8)  | 7.2 ± 0.8    | (2)  | 7      | 6 - 8.4      | ---       | ---  | 7.25        | (2)  | 7.45       | (2)       | 17.4 ± 1.5    | (3) TCGS  |        |
| Bf   | ug/g  | 9          | (12) | 6.9 ± 0.9    | (10) | 6.8    | 5.4 - 8.6    | ---       | ---  | 7.0 ± 0.8   | (10) | ---        | ---       | 7.0 ± 0.8     | (4) OES   |        |
| C    | %     | ---        | (3)  | 50.49 ± 0.18 | (4)  | 50.4   | 50.37 - 50.7 | ---       | ---  | ---         | ---  | ---        | ---       | 6.24          | (2) XRF   |        |
| Ca   | ug/g  | 4100 ± 200 | (28) | 4200 ± 360   | (4)  | 4182   | 3600 - 5000  | 4660      | (1)  | 4290 ± 180  | (4)  | 4130 ± 230 | (11)      | 50.49 ± 0.18  | (3) CB    |        |
| Ca   | ug/g  | ---        | ---  | ---          | ---  | ---    | ---          | ---       | ---  | ---         | ---  | ---        | ---       | 3765          | (2) XRF   |        |
| Cd   | ng/g  | < 500      | (20) | 220 ± 60     | (3)  | 200    | 140 - 340    | 240 ± 60  | (9)  | 193 ± 13    | (3)  | 210 ± 70   | (8)       | ---           | 4290      | (1) NM |
| Ce   | ng/g  | 400        | (3)  | 210 ± 50     | (3)  | ---    | 150 - 258    | ---       | ---  | 210 ± 50    | (3)  | ---        | ---       | ---           | ---       |        |
| Cl   | ug/g  | ---        | (5)  | 280 ± 30     | (4)  | 280    | 243 - 305    | ---       | ---  | 270 ± 25    | (4)  | ---        | ---       | 305           | (1) XRF   |        |
| Co   | ng/g  | 100        | (6)  | 122 ± 14     | (4)  | 110    | 110 - 140    | 110       | (1)  | 128 ± 13    | (4)  | 110        | (1)       | ---           | ---       |        |
| Cr   | ug/g  | 2.6 ± 0.2  | (16) | 2.6 ± 0.2    | (6)  | 2.58   | 2.2 - 3.1    | 2.5 ± 0.2 | (6)  | 2.57 ± 0.15 | (3)  | 2.5 ± 0.4  | (7)       | 2.58          | (1) XRF   |        |
| Cs   | ng/g  | ---        | (6)  | 110 ± 10     | (6)  | 104    | 101 - 126    | ---       | ---  | 110 ± 10    | (6)  | ---        | ---       | ---           | ---       |        |
| Cu   | ug/g  | 3.0 ± 0.3  | (34) | 3.0 ± 0.4    | (9)  | 3      | 2 - 4.5      | 3.3 ± 0.3 | (9)  | 2.9 ± 0.4   | (4)  | 2.7 ± 0.3  | (11)      | 3.06 ± 0.10   | (3) XRF   |        |
| Cu   | ug/g  | ---        | ---  | ---          | ---  | ---    | ---          | ---       | ---  | ---         | ---  | ---        | ---       | 2.91 ± 0.02   | (3) COLOR |        |
| Cu   | ug/g  | ---        | ---  | ---          | ---  | ---    | ---          | ---       | ---  | ---         | ---  | ---        | ---       | 5.9 ± 2.2     | (9) OES   |        |
| Eu   | ng/g  | 6          | (3)  | 5.5 ± 1.3    | (3)  | 6      | 4 - 6.5      | ---       | ---  | 5.5 ± 1.3   | (3)  | ---        | ---       | ---           | ---       |        |
| F    | ug/g  | ---        | (4)  | 2.8 ± 0.7    | (4)  | 2.5    | 2 - 3.7      | ---       | ---  | ---         | ---  | ---        | ---       | ---           | ---       |        |
| F    | ug/g  | ---        | ---  | ---          | ---  | ---    | ---          | ---       | ---  | ---         | ---  | ---        | ---       | ---           | ---       |        |
| Fe   | ug/g  | 200 ± 10   | (36) | 185 ± 26     | (4)  | 188    | 118 - 254    | 196 ± 13  | (4)  | 203 ± 40    | (6)  | 189 ± 22   | (12)      | ---           | ---       |        |
| Fe   | ug/g  | ---        | ---  | ---          | ---  | ---    | ---          | ---       | ---  | ---         | ---  | ---        | ---       | ---           | ---       |        |
| Gd   | ng/g  | ---        | (1)  | 28           | (1)  | ---    | ---          | ---       | ---  | 28          | (1)  | ---        | ---       | ---           | ---       |        |
| H    | %     | ---        | (3)  | 6.48 ± 0.08  | (3)  | 6.5    | 6.39 - 6.54  | ---       | ---  | ---         | ---  | ---        | ---       | ---           | ---       |        |
| H2O- | %     | ---        | (1)  | 4.4          | (1)  | ---    | ---          | ---       | ---  | ---         | ---  | ---        | ---       | ---           | ---       |        |
| Hf   | ng/g  | ---        | (2)  | 23           | (2)  | ---    | 10 - 36      | ---       | ---  | 23          | (2)  | ---        | ---       | ---           | ---       |        |
| Hg   | ng/g  | 150 ± 50   | (5)  | 144 ± 16     | (3)  | 147    | 121 - 160    | 146 ± 12  | (3)  | 140         | (2)  | ---        | ---       | ---           | ---       |        |
| I    | ng/g  | ---        | (2)  | 145          | (2)  | ---    | 140 - 150    | ---       | ---  | 145         | (2)  | ---        | ---       | ---           | ---       |        |
| K    | ug/g  | 3700 ± 200 | (20) | 3670 ± 310   | (4)  | 3700   | 2700 - 5100  | ---       | ---  | 4100 ± 700  | (4)  | 3630 ± 200 | (9)       | ---           | ---       |        |
| La   | ng/g  | 200        | (5)  | 160 ± 40     | (5)  | 141    | 130 - 210    | ---       | ---  | 160 ± 40    | (5)  | ---        | ---       | ---           | ---       |        |
| Li   | ng/g  | ---        | (1)  | 340          | (1)  | ---    | ---          | 340       | (1)  | ---         | ---  | ---        | ---       | ---           | ---       |        |
| Lu   | ng/g  | ---        | (3)  | 1.6 ± 0.6    | (3)  | 1.3    | 1.2 - 2.2    | ---       | ---  | 1.6 ± 0.6   | (3)  | ---        | ---       | ---           | ---       |        |

TABLE 1575-1: COMPILED DATA FOR NBS SRM 1575 PINE NEEDLES (cont.)

| ELE | UNITS | NBS        |     | CONSENSUS   |      | MEDIAN | RANGE       | AA         |      | NAA        |     | ICPES       |           | OTHER METHODS |        |     |            |     |       |
|-----|-------|------------|-----|-------------|------|--------|-------------|------------|------|------------|-----|-------------|-----------|---------------|--------|-----|------------|-----|-------|
|     |       | Mean ± SD  | (n) | Mean ± SD   | (n)  |        |             | Mean ± SD  | (n)  | Mean ± SD  | (n) | Method      | Mean ± SD | (n)           | Method |     |            |     |       |
| Mg  | ug/g  | ---        |     | 1220 ± 160  | (24) | 1200   | 900 - 1600  | ---        |      | 1340 ± 150 | (3) | 1150 ± 70   | (11)      | 1320 ± 230    | (10)   | OES | 1070       | (1) | XRF   |
| Mn  | ug/g  | 675 ± 15   |     | 650 ± 70    | (34) | 670    | 430 - 738   | 677 ± 20   | (4)  | 684 ± 17   | (4) | 663 ± 32    | (13)      | 1070 ± 750    | (4)    | XRF | 570 ± 100  | (8) | OES   |
| Mn  | ug/g  | ---        |     | ---         |      | ---    | ---         | ---        |      | ---        |     | ---         |           | ---           |        | --- | 673        | (1) | DCPES |
| Mo  | ug/g  | ---        |     | 0.15 ± 0.05 | (5)  | 0.13   | 0.1 - 0.2   | ---        |      | 0.1        | (1) | 0.16 ± 0.05 | (4)       | 2.3 ± 1.0     | (4)    | OES | ---        |     |       |
| N   | %     | 1.2        |     | 1.20 ± 0.10 | (3)  | 1.2    | 1.11 - 1.3  | ---        |      | ---        |     | ---         |           | 1.16          | (2)    | CB  | 1.3        | (1) | TCGS  |
| Na  | ug/g  | ---        |     | 50 ± 30     | (17) | 37     | 18 - 105    | ---        |      | 46 ± 18    | (5) | 40 ± 37     | (5)       | 59 ± 36       | (7)    | OES | ---        |     |       |
| Nd  | ng/g  | ---        |     | 164         | (2)  | ---    | 128 - 200   | ---        |      | 164        | (2) | ---         |           | ---           |        | --- | ---        |     |       |
| Ni  | ug/g  | 3.5        |     | 2.5 ± 0.3   | (13) | 2.31   | 2.2 - 3.3   | 3.3        | (1)  | 2.25       | (2) | 2.30 ± 0.08 | (6)       | 2.50          | (2)    | XRF | 2.63       | (1) | VOLT  |
| Ni  | ug/g  | ---        |     | ---         |      | ---    | ---         | ---        |      | ---        |     | ---         |           | ---           |        | --- | 2.9        | (1) | DCPES |
| P   | ug/g  | 1200 ± 200 |     | 1190 ± 110  | (25) | 1170   | 1000 - 1410 | 1255       | (2)  | ---        |     | 1170 ± 60   | (13)      | 1145          | (2)    | XRF | 1240 ± 150 | (7) | OES   |
| P   | ug/g  | ---        |     | ---         |      | ---    | ---         | ---        |      | ---        |     | ---         |           | ---           |        | --- | 1100       | (1) | CPAA  |
| Pb  | ug/g  | 10.8 ± 0.5 |     | 10.7 ± 0.5  | (29) | 10.8   | 9.6 - 11.9  | 10.8 ± 0.4 | (20) | ---        |     | 11.3 ± 1.8  | (6)       | 8.6 ± 1.5     | (3)    | XRF | 10.6       | (1) | IDMS  |
| Pb  | ug/g  | ---        |     | ---         |      | ---    | ---         | ---        |      | ---        |     | ---         |           | ---           |        | --- | 10.7       | (2) | ASV   |
| Pd  | ng/g  | ---        |     | < 2         |      | ---    | ---         | ---        |      | < 2        |     | ---         |           | ---           |        | --- | ---        |     |       |
| Pr  | ng/g  | ---        |     | < 70        |      | ---    | ---         | ---        |      | < 70       |     | ---         |           | ---           |        | --- | ---        |     |       |
| Rb  | ug/g  | 11.7 ± 0.1 |     | 11.7 ± 1.0  | (6)  | 11     | 10.8 - 13.1 | ---        |      | 11.6 ± 0.8 | (4) | ---         |           | 12.0          | (2)    | XRF | ---        |     |       |
| S   | ug/g  | ---        |     | 1320 ± 110  | (9)  | 1250   | 1200 - 1500 | ---        |      | ---        |     | 1400        | (1)       | 1220 ± 430    | (4)    | XRF | 1240 ± 30  | (5) | CB    |
| Sb  | ng/g  | 200        |     | 198 ± 17    | (12) | 189    | 180 - 220   | 184 ± 4    | (3)  | 202 ± 17   | (9) | ---         |           | ---           |        | --- | ---        |     |       |
| Sc  | ng/g  | 30         |     | 41 ± 8      | (6)  | 39     | 27 - 53     | ---        |      | 41 ± 8     | (6) | ---         |           | ---           |        | --- | ---        |     |       |
| Se  | ng/g  | ---        |     | 47 ± 5      | (5)  | 44     | 43 - 53     | ---        |      | 49 ± 4     | (3) | ---         |           | ---           |        | --- | 43         | (2) | GC    |
| Si  | ug/g  | ---        |     | 814         | (2)  | ---    | 248 - 1380  | ---        |      | ---        |     | ---         |           | 814           | (2)    | XRF | ---        |     |       |
| Sm  | ng/g  | ---        |     | 20 ± 2      | (3)  | 20     | 18 - 21     | ---        |      | 20 ± 2     | (3) | ---         |           | ---           |        | --- | ---        |     |       |
| Sr  | ug/g  | 4.8 ± 0.2  |     | 5.0 ± 0.4   | (7)  | 4.9    | 4.45 - 5.5  | ---        |      | 5.4        | (1) | 4.82        | (2)       | 4.98          | (2)    | XRF | 5          | (1) | OES   |
| Sr  | ug/g  | ---        |     | ---         |      | ---    | ---         | ---        |      | ---        |     | ---         |           | ---           |        | --- | 4.7        | (1) | AF    |
| Ta  | ng/g  | ---        |     | 13          | (1)  | ---    | ---         | ---        |      | 13         | (1) | ---         |           | ---           |        | --- | ---        |     |       |
| Tb  | ng/g  | ---        |     | 31          | (2)  | ---    | 2 - 60      | ---        |      | 31         | (2) | ---         |           | ---           |        | --- | ---        |     |       |
| Th  | ng/g  | 37 ± 3     |     | 40 ± 9      | (3)  | 35     | 34 - 50     | ---        |      | 40 ± 10    | (3) | ---         |           | ---           |        | --- | ---        |     |       |
| Ti  | ug/g  | ---        |     | 13.7        | (1)  | ---    | ---         | ---        |      | ---        |     | ---         |           | 13.7          | (1)    | XRF | ---        |     |       |
| Tl  | ng/g  | 50         |     | 29 ± 2      | (5)  | 29     | 27 - 31     | 29         | (1)  | ---        |     | ---         |           | 29.0 ± 1.8    | (4)    | ASV | ---        |     |       |
| U   | ng/g  | 20 ± 4     |     | 16 ± 3      | (6)  | 15     | 13 - 20     | ---        |      | 16 ± 2     | (6) | ---         |           | ---           |        | --- | ---        |     |       |
| V   | ng/g  | ---        |     | 390 ± 70    | (8)  | 370    | 248 - 470   | ---        |      | 380 ± 90   | (6) | 390         | (2)       | ---           |        | --- | ---        |     |       |
| W   | ng/g  | ---        |     | 50          | (1)  | ---    | ---         | ---        |      | 50         | (1) | ---         |           | ---           |        | --- | ---        |     |       |
| Yb  | ng/g  | ---        |     | 17.5        | (2)  | ---    | 9 - 26      | ---        |      | 17.5       | (2) | ---         |           | ---           |        | --- | ---        |     |       |
| Zn  | ug/g  | ---        |     | 67 ± 9      | (33) | 66     | 51 - 87     | 65         | (1)  | 58 ± 6     | (4) | 68 ± 8      | (15)      | 60 ± 7        | (4)    | XRF | 74 ± 10    | (8) | OES   |
| Zn  | ug/g  | ---        |     | ---         |      | ---    | ---         | ---        |      | ---        |     | ---         |           | ---           |        | --- | 71         | (1) | DCPES |

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>As (ng/g) cont.</u> |       |     |        |           |
| 150              | 50    |     | RTNA   | 80SLO 01  | 210                    | 10    |     | COLOR  | 77BUR 01  |
|                  |       |     |        |           | 210                    | 20    |     | HAA    | 84NAR 01  |
|                  |       |     |        |           | 215                    | 6     |     | HAA    | 81UTH 01  |
|                  |       |     |        |           | 220                    | 20    | 7   | RTNA   | 80GAL 02  |
|                  |       |     | OES    | 75JON 11  | 220                    | 40    |     | IENA   | 82GLA 02  |
|                  |       |     | OES    | 75JON 02  | 220                    | 60    |     | HAA    | 85NAR 03  |
|                  |       |     | ICPES  | 81GOO 01  | 230                    |       |     | HAA    | 81ARA 01  |
|                  |       |     | OES    | 75JON 06  | 230                    | 20    |     | FAA    | 80DUP 01  |
|                  | 18    | 11  | ICPES  | 81MUN 01  | 240                    | 20    | 7   | RTNA   | 77GIL 03  |
|                  | 20.4  | 6   | COLOR  | 85BAR 01  | 240                    | 20    | 7   | RTNA   | 80GAL 02  |
|                  |       |     | OES    | 75JON 07  |                        |       |     |        |           |
|                  | 16.6  | 6   | COLOR  | 85BAR 01  | <u>Au (ng/g)</u>       |       |     |        |           |
|                  |       |     | OES    | 75JON 05  | 0.3                    | 0.08  |     | ITNA   | 79REN 03  |
|                  |       |     | OES    | 75JON 08  | 0.9                    | 0.1   |     | RTNA   | 80SLO 01  |
|                  |       |     | OES    | 75JON 04  |                        |       |     |        |           |
|                  |       |     | ICPES  | 84NAD 01  | <u>B (ug/g)</u>        |       |     |        |           |
|                  | 15    | 11  | ICPES  | 81MUN 01  | 13                     |       |     | OES    | 75JON 08  |
|                  |       |     | OES    | 75JON 03  | 13                     |       |     | OES    | 75JON 09  |
|                  | 17    | 11  | ICPES  | 82JON 01  | 13.3                   | 0.7   |     | ICPES  | 79HER 01  |
|                  | 6     |     | ITNA   | 84GLA 11  | 15                     |       |     | OES    | 75JON 02  |
|                  | 20    |     | AA     | 83RAP 01  | 15                     |       |     | OES    | 75JON 05  |
|                  | 12    |     | ITNA   | 86KRA 02  | 16                     | 4     |     | ITNA   | 82SCH 05  |
|                  |       |     | FAA    | 86KRA 02  | 16.1                   | 0.1   |     | TCGS   | 82GLA 02  |
|                  | 10    |     | ICPES  | 83SCH 04  | 17                     |       |     | OES    | 75JON 01  |
|                  | 44    |     | ITNA   | 77NAD 02  | 17                     | 1     | 35  | TCGS   | 81GLA 04  |
|                  | 1     |     | ICPES  | 84FOG 01  | 17.2                   | 1.4   | 11  | ICPES  | 81MUN 01  |
|                  | 47    |     | CPXRF  | 80KIR 01  | 17.6                   | 0.7   | 11  | ICPES  | 81MUN 01  |
|                  |       |     | AA     | 81ARA 01  | 18                     |       |     | ICPES  | 81GOO 01  |
|                  | 50    |     | ITNA   | 85GAU 04  | 18                     |       |     | OES    | 75JON 07  |
|                  |       | 35  | ITNA   | 81GLA 03  | 19                     |       |     | OES    | 75JON 06  |
|                  |       |     | CPXRF  | 84KAU 01  | 19                     | 1     |     | TCGS   | 84GLA 11  |
|                  | 200   |     | ITNA   | 80SLO 01  | 20                     |       |     | OES    | 75JON 04  |
|                  |       |     | OES    | 75JON 01  | 20                     |       |     | OES    | 75JON 03  |
|                  |       |     |        |           | 20                     |       |     | OES    | 75JON 11  |
| <u>As (ng/g)</u> |       |     |        |           | <u>Ba (ug/g)</u>       |       |     |        |           |
| 150              | 50    |     | RTNA   | 80SLO 01  | 3                      |       |     | OES    | 75JON 03  |
| 154              | 5     | 7   | FAA    | 82HOE 02  | 6                      |       |     | OES    | 75JON 05  |
| 180              | 15    | 7   | FAA    | 82HOE 02  | 6.1                    | 0.4   |     | ITNA   | 77NAD 02  |
| 181              | 3     |     | RTNA   | 79HOE 01  | 7                      |       |     | OES    | 75JON 11  |
| 187              | 6     | 7   | FAA    | 82HOE 02  | 7                      |       |     | OES    | 75JON 04  |
| 190              | 10    | 11  | HAA    | 82JON 01  | 7.1                    |       |     | ICPES  | 84NAD 01  |
| 190              | 30    | 11  | HAA    | 82JON 01  | 7.8                    | 4     |     | ICPES  | 85WHI 02  |
| 193              |       |     | ICPES  | 84MIA 01  | 8                      |       |     | OES    | 75JON 01  |
| 200              |       |     | FAA    | 84XIA 01  | 8.4                    | 2.5   |     | ITNA   | 85GAU 04  |
| 200              | 20    | 7   | RTNA   | 80GAL 02  |                        |       |     |        |           |
| 200              | 20    | 7   | RTNA   | 77GIL 03  |                        |       |     |        |           |
| 200              | 30    |     | ITNA   | 77NAD 02  |                        |       |     |        |           |
| 200              | 50    |     | AA     | 83RAP 01  |                        |       |     |        |           |
| 205              | 22    |     | ITNA   | 85GAU 04  |                        |       |     |        |           |

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Br (ug/g)</u> |       |     |        |           | <u>Ca (ug/g) cont.</u> |       |     |        |           |
| 5.4              | 1.2   |     | CPXRF  | 80KIR 01  | 4800                   |       |     | OES    | 75JON 04  |
| 6.1              | 0.09  |     | ITNA   | 79REN 03  | 4900                   |       |     | OES    | 75JON 01  |
| 6.25             | 0.2   |     | ITNA   | 80HOE 01  | 5000                   |       |     | ICPES  | 81GOO 01  |
| 6.4              | 0.8   | 5   | IENA   | 79GLA 02  | 5300                   |       |     | OES    | 75JON 08  |
| 6.43             | 0.08  |     | ITNA   | 77NAD 02  | 13100                  |       |     | EXRF   | 81PAR 01  |
| 6.8              | 0.5   | 5   | IENA   | 79GLA 02  |                        |       |     |        |           |
| 6.9              | 0.2   |     | ITNA   | 85GAU 04  | <u>Cd (ng/g)</u>       |       |     |        |           |
| 7.08             |       |     | CPXRF  | 84KAU 01  | 140                    | 70    | 11  | ICPES  | 82JON 01  |
| 7.4              | 0.3   |     | ITNA   | 77STE 02  | 150                    | 20    |     | ICPES  | 84FOG 01  |
| 7.6              |       |     | ITNA   | 86GAU 01  | 160                    | 90    | 11  | ICPES  | 82JON 01  |
| 8                |       |     | ITNA   | 84GLA 02  | 180                    | 30    |     | RTNA   | 80SLO 01  |
| 8.6              |       |     | ITNA   | 84GLA 11  | 180                    | 90    | 11  | ICPES  | 82JON 01  |
| 30               |       |     | EXRF   | 81PAR 01  | 185                    | 17    |     | FAA    | 84GLA 11  |
| <u>C (%)</u>     |       |     |        |           | 193                    | 10    | 7   | RTNA   | 80GAL 02  |
| 50.37            | 0.16  |     | CB     | 80SCH 02  | 193                    | 30    |     | AA     | 86GAU 01  |
| 50.4             | 1.5   | 35  | CB     | 79GLA 04  | 200                    |       |     | FAA    | 80PRE 01  |
| 50.7             | 0.9   |     | CB     | 82GLA 02  | 200                    | 20    |     | ICPES  | 83SCH 04  |
| 54               | 2     | 35  | TCGS   | 79GLA 04  | 206                    | 10    |     | RTNA   | 77DER 01  |
| <u>Ca (ug/g)</u> |       |     |        |           | 210                    |       |     | FAA    | 82PRE 01  |
| 3100             | 200   |     | ITNA   | 80SLO 01  | 220                    | 30    |     | FAA    | 84GLA 02  |
| 3300             |       |     | OES    | 75JON 07  | 250                    | 10    |     | FAA    | 80LEG 01  |
| 3600             |       |     | ICPES  | 84NAD 01  | 260                    | 10    |     | ICPES  | 79HER 01  |
| 3700             | 500   |     | CPXRF  | 80KIR 01  | 300                    | 40    | D   | FAA    | 80SCH 08  |
| 3800             |       |     | OES    | 75JON 02  | 300                    | 40    |     | AA     | 80SCH 05  |
| 3800             |       |     | OES    | 75JON 11  | 300                    | 100   | 11  | ICPES  | 82JON 01  |
| 3800             |       |     | OES    | 75JON 05  | 300                    | 200   | 11  | ICPES  | 81MUN 01  |
| 3830             |       |     | CPXRF  | 84KAU 01  | 310                    | 30    |     | FAA    | 81KNA 01  |
| 3900             |       |     | OES    | 75JON 09  | 340                    | 30    |     | AA     | 83RAP 01  |
| 4000             |       |     | OES    | 75JON 06  | <u>Ce (ng/g)</u>       |       |     |        |           |
| 4000             | 30    |     | ICPES  | 84FOG 01  | 150                    | 30    |     | RTNA   | 80SLO 01  |
| 4000             | 100   | 11  | ICPES  | 82JON 01  | 220                    | 50    |     | ITNA   | 85GAU 04  |
| 4070             | 120   |     | ITNA   | 85GAU 04  | 258                    | 27    |     | RTNA   | 83TJI 01  |
| 4090             | 20    | 11  | ICPES  | 82JON 01  | <u>Cl (ug/g)</u>       |       |     |        |           |
| 4100             | 30    | 11  | ICPES  | 82JON 01  | 243                    | 20    |     | ITNA   | 77NAD 02  |
| 4110             | 30    | 11  | ICPES  | 82JON 01  | 260                    |       |     | ITNA   | 84GLA 11  |
| 4182             | 67    | 11  | ICPES  | 81MUN 01  | 280                    | 30    |     | ITNA   | 80SLO 01  |
| 4200             | 100   |     | ICPES  | 85WHI 02  | 300                    | 20    |     | ITNA   | 85GAU 04  |
| 4290             | 40    |     | NM     | 81YUZ 01  | 305                    |       |     | CPXRF  | 84KAU 01  |
| 4290             | 60    |     | ICPES  | 79HER 01  | 510                    | 120   |     | CPXRF  | 79REN 02  |
| 4300             |       |     | ITNA   | 84GLA 11  | 551                    | 37    |     | ITNA   | 77STE 02  |
| 4300             | 600   |     | ITNA   | 79REN 03  |                        |       |     |        |           |
| 4316             | 157   | 11  | ICPES  | 81MUN 01  |                        |       |     |        |           |
| 4500             | 400   |     | ICPES  | 85LYO 01  |                        |       |     |        |           |
| 4500             | 400   |     | ITNA   | 77NAD 02  |                        |       |     |        |           |
| 4600             |       |     | OES    | 75JON 03  |                        |       |     |        |           |
| 4660             |       |     | AA     | 84GLA 02  |                        |       |     |        |           |

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Co (ng/g)</u> |       |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| 110              |       |     | FAA    | 82HOE 01  | 0.7              |       |     | OES    | 75JON 09  |
| 110              |       |     | RTNA   | 80SLO 01  | 2                |       |     | ICPES  | 81GOO 01  |
| 110              | 20    |     | ICPES  | 84FOG 01  | 2                |       |     | OES    | 75JON 02  |
| 130              | 20    |     | ITNA   | 77NAD 02  | 2.3              |       |     | FAA    | 83ATS 01  |
| 134              | 6     |     | ITNA   | 77GUZ 01  | 2.3              | 0.7   | 11  | ICPES  | 81MUN 01  |
| 140              | 20    |     | ITNA   | 85GAU 04  | 2.41             | 0.09  |     | RTNA   | 77DER 01  |
| 340              | 180   |     | ITNA   | 79REN 03  | 2.5              | 0.3   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 2.7              | 0.2   | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 2.8              | 0.1   |     | AA     | 83RAP 01  |
|                  |       |     |        |           | 2.8              | 0.3   |     | FAE    | 76EPS 01  |
|                  |       |     |        |           | 2.8              | 0.5   | 11  | ICPES  | 81MUN 01  |
| 1.3              | 0.2   | 11  | ICPES  | 82JON 01  | 2.9              | 0.1   |     | COLOR  | 76ZAN 02  |
| 1.5              | 0.3   | 11  | ICPES  | 81MUN 01  | 2.9              | 0.1   |     | COLOR  | 76EPS 01  |
| 1.8              |       |     | ICPES  | 84NAD 01  | 2.9              | 0.2   |     | ICPES  | 83SCH 04  |
| 2.2              | 0.5   | 11  | ICPES  | 81MUN 01  | 2.9              | 0.2   | 11  | ICPES  | 82JON 01  |
| 2.25             |       | 11  | AA     | 79HOE 02  | 2.94             | 0.01  |     | COLOR  | 77BUR 01  |
| 2.25             |       | 11  | AA     | 79HOE 02  | 2.98             | 0.16  | 7   | RTNA   | 80GAL 02  |
| 2.39             |       | 11  | AA     | 79HOE 02  | 3                | 0.1   |     | ICPES  | 80SCH 08  |
| 2.41             | 0.11  |     | ITNA   | 77NAD 02  | 3                | 0.15  |     | ICPES  | 81KNA 01  |
| 2.5              |       |     | ICPES  | 81GOO 01  | 3                | 0.3   |     | AA     | 76ZAN 01  |
| 2.5              | 0.1   |     | AA     | 83RAP 01  | 3                | 0.3   | D   | AA     | 76ZAN 02  |
| 2.58             |       |     | CPXRF  | 84KAU 01  | 3                | 0.3   |     | VV     | 80SCH 05  |
| 2.6              |       |     | AA     | 82WIL 04  | 3                | 0.3   |     | XRF    | 83PEL 01  |
| 2.6              | 0.1   |     | ITNA   | 82GLA 02  | 3                | 0.3   | 11  | ICPES  | 82JON 01  |
| 2.6              | 0.2   |     | ICPES  | 81KNA 01  | 3                | 0.52  |     | CPXRF  | 80KIR 01  |
| 2.62             | 0.2   |     | ICPES  | 84FOG 01  | 3.01             | 0.5   |     | ICPES  | 84FOG 01  |
| 2.7              | 0.2   |     | ITNA   | 85GAU 04  | 3.04             | 0.16  | 7   | RTNA   | 80GAL 02  |
| 2.8              |       |     | FAA    | 82HOE 01  | 3.17             |       |     | CPXRF  | 84KAU 01  |
| 2.9              | 0.2   | 11  | ICPES  | 82JON 01  | 3.2              | 0.2   |     | DCPES  | 79REE 01  |
| 3.1              | 0.6   |     | ICPES  | 79HER 01  | 3.2              | 0.2   | D   | DCPES  | 81REE 01  |
| 3.93             | 0.05  |     | ITNA   | 79REN 03  | 3.2              | 0.4   |     | AA     | 76EPS 02  |
| 4.48             | 0.19  |     | FAA    | 83CAR 02  | 3.2              | 0.4   |     | AA     | 84KAN 01  |
|                  |       |     |        |           | 3.2              | 0.4   |     | AA     | 76EPS 01  |
|                  |       |     |        |           | 3.27             | 0.05  |     | RTNA   | 80SLO 01  |
|                  |       |     |        |           | 3.45             |       | 11  | AA     | 79HOE 02  |
|                  |       |     |        |           | 3.55             |       | 11  | AA     | 79HOE 02  |
|                  |       |     |        |           | 3.6              | 0.3   |     | FAA    | 82KRI 01  |
|                  |       |     |        |           | 3.7              |       |     | AA     | 85KOJ 01  |
|                  |       |     |        |           | 4                |       |     | OES    | 75JON 04  |
|                  |       |     |        |           | 4.1              | 0.8   |     | ICPES  | 79HER 01  |
|                  |       |     |        |           | 4.5              |       |     | OES    | 75JON 07  |
|                  |       |     |        |           | 5                |       |     | OES    | 75JON 06  |
|                  |       |     |        |           | 6                |       |     | OES    | 75JON 08  |
|                  |       |     |        |           | 8                |       |     | OES    | 75JON 11  |
|                  |       |     |        |           | 8                |       |     | OES    | 75JON 07  |
|                  |       |     |        |           | 8                |       |     | OES    | 75JON 05  |
|                  |       |     |        |           | 8                |       |     | OES    | 75JON 03  |
|                  |       |     |        |           | 11               |       |     | AA     | 81ARA 01  |
|                  |       |     |        |           | 53               |       |     | XRF    | 80SUZ 02  |
| <u>Cs (ng/g)</u> |       |     |        |           |                  |       |     |        |           |
| 101              | 3     |     | ITNA   | 77NAD 02  |                  |       |     |        |           |
| 102              | 7     |     | ITNA   | 84GLA 11  |                  |       |     |        |           |
| 104              | 4     |     | ITNA   | 84GLA 02  |                  |       |     |        |           |
| 109              | 3     |     | ITNA   | 86GAU 01  |                  |       |     |        |           |
| 115              | 7     |     | ITNA   | 77GUZ 01  |                  |       |     |        |           |
| 126              | 18    |     | ITNA   | 85GAU 04  |                  |       |     |        |           |
| 160              | 60    |     | ITNA   | 79REN 03  |                  |       |     |        |           |

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Eu (ng/g)</u> |       |     |        |           | <u>Fe (ug/g) cont.</u> |       |     |        |           |
| 4                | 1     |     | RTNA   | 83TJI 01  | 209                    |       |     | AA     | 82WIL 04  |
| 6                | 2.6   |     | ITNA   | 77GUZ 01  | 214.5                  | 21.9  |     | ICPES  | 85LYO 01  |
| 6.5              | 0.8   |     | ITNA   | 77NAD 02  | 217                    | 8     | 11  | ICPES  | 81MUN 01  |
| 11.3             | 1.6   |     | ITNA   | 85GAU 04  | 254                    |       |     | OES    | 75JON 05  |
|                  |       |     |        |           | 260                    |       |     | OES    | 75JON 04  |
|                  |       |     |        |           | 280                    | 50    |     | ITNA   | 79REN 03  |
|                  |       |     |        |           | 595                    |       |     | AA     | 81ARA 01  |
|                  |       |     |        |           | 790                    |       |     | EXRF   | 81PAR 01  |
| <u>F (ug/g)</u>  |       |     |        |           | <u>Gd (ng/g)</u>       |       |     |        |           |
| 2                |       |     | COLOR  | 83JAC 01  | 28                     | 7     |     | RTNA   | 83TJI 01  |
| 2.5              | 0.3   |     | ISE    | 83KNA 01  |                        |       |     |        |           |
| 2.9              | 0.8   |     | ISE    | 84GLA 02  |                        |       |     |        |           |
| 3.7              | 0.8   |     | MS     | 77STE 02  |                        |       |     |        |           |
| <u>Fe (ug/g)</u> |       |     |        |           | <u>H (%)</u>           |       |     |        |           |
| 47               |       |     | OES    | 75JON 09  | 6.39                   | 0.07  |     | CB     | 80SCH 02  |
| 100              | 10    | 11  | ICPES  | 81MUN 01  | 6.5                    | 0.1   | 35  | TCGS   | 79GLA 04  |
| 106              |       |     | OES    | 75JON 06  | 6.54                   | 0.08  |     | CB     | 82GLA 02  |
| 118              |       |     | OES    | 75JON 02  |                        |       |     |        |           |
| 120              |       |     | OES    | 75JON 03  |                        |       |     |        |           |
| 142              |       |     | OES    | 75JON 11  |                        |       |     |        |           |
| 152              |       |     | ICPES  | 84NAD 01  |                        |       |     |        |           |
| 152              |       |     | ICPES  | 81GOO 01  | 4.4                    |       | D   | GRAV   | 85NAR 03  |
| 156              |       |     | OES    | 75JON 01  | 4.4                    |       |     | GRAV   | 84NAR 01  |
| 170              | 10    |     | ITNA   | 79DAS 01  |                        |       |     |        |           |
| 170              | 10    |     | RTNA   | 80SLO 01  |                        |       |     |        |           |
| 174              | 0.9   | 11  | COLOR  | 82SCH 03  |                        |       |     |        |           |
| 174              | 6     | 11  | COLOR  | 82SCH 03  | 10                     |       |     | RTNA   | 80SLO 01  |
| 175              | 7     | 11  | ICPES  | 82JON 01  | 36                     | 17    |     | ITNA   | 85GAU 04  |
| 177              | 4     | 11  | ICPES  | 82JON 01  |                        |       |     |        |           |
| 182              |       |     | OES    | 75JON 08  |                        |       |     |        |           |
| 183              | 3     |     | ICPES  | 79HER 01  |                        |       |     |        |           |
| 185              |       | 11  | AA     | 79HOE 02  | 121                    | 6     |     | ITNA   | 77NAD 02  |
| 185              |       | 11  | AA     | 79HOE 02  | 133                    |       | 11  | CVAA   | 79HOE 02  |
| 188              | 9     |     | XRF    | 85AVA 01  | 147                    | 8     |     | CVAA   | 82GLA 02  |
| 188              | 17    |     | CPXRF  | 80KIR 01  | 157                    | 18    |     | CVAA   | 80DUM 01  |
| 193              |       |     | OES    | 75JON 07  | 160                    | 20    |     | RTNA   | 80SLO 01  |
| 194              | 4     | 11  | ICPES  | 82JON 01  |                        |       |     |        |           |
| 194              | 6     | 11  | COLOR  | 82SCH 03  |                        |       |     |        |           |
| 194              | 10    |     | ICPES  | 80SCH 05  |                        |       |     |        |           |
| 195              |       |     | CPXRF  | 84KAU 01  |                        |       |     |        |           |
| 195              | 10    | 11  | ICPES  | 82JON 01  | <                      | 200   | L   | PAA    | 77WIL 01  |
| 195              | 10    | D   | ICPES  | 80SCH 08  | 140                    | 20    |     | IENA   | 82SAT 01  |
| 195.7            | 5.4   |     | ITNA   | 77GUZ 01  | 150                    | 50    |     | RTNA   | 77STE 02  |
| 196              | 7     |     | ITNA   | 77NAD 02  |                        |       |     |        |           |
| 196              | 13    |     | XRF    | 83PEL 01  |                        |       |     |        |           |
| 198              | 8     |     | AF     | 81HOR 01  |                        |       |     |        |           |
| 204              | 10    |     | ITNA   | 85GAU 04  |                        |       |     |        |           |
| 204              | 12    |     | ICPES  | 81KNA 01  |                        |       |     |        |           |
| 207              | 0.8   |     | ICPES  | 84FOG 01  |                        |       |     |        |           |
| 207              | 12    |     | AA     | 83RAP 01  |                        |       |     |        |           |

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>K (ug/g)</u>  |       |     |        |           | <u>Mg (ug/g)</u> |       |     |        |           |
| 2700             |       |     | OES    | 75JON 05  | 900              |       |     | OES    | 75JON 09  |
| 3000             |       |     | ICPES  | 84NAD 01  | 1000             |       |     | ICPES  | 84NAD 01  |
| 3200             |       |     | OES    | 75JON 09  | 1025             |       |     | ICPES  | 81GOO 01  |
| 3300             | 100   |     | ICPES  | 79HER 01  | 1070             |       |     | CPXRF  | 84KAU 01  |
| 3400             | 200   | 11  | ICPES  | 82JON 01  | 1100             | 100   |     | ICPES  | 79HER 01  |
| 3500             | 500   |     | CPXRF  | 80KIR 01  | 1140             | 19    | 11  | ICPES  | 81MUN 01  |
| 3530             | 80    | 11  | ICPES  | 82JON 01  | 1180             | 30    | 11  | ICPES  | 82JON 01  |
| 3600             |       |     | ICPES  | 79COO 01  | 1190             | 20    | 11  | ICPES  | 82JON 01  |
| 3600             | 100   |     | ITNA   | 77NAD 02  | 1191             | 38    | 11  | ICPES  | 81MUN 01  |
| 3620             | 40    | 11  | ICPES  | 82JON 01  | 1200             |       |     | OES    | 75JON 06  |
| 3665             | 82    | 11  | ICPES  | 81MUN 01  | 1200             |       |     | OES    | 75JON 01  |
| 3700             |       |     | OES    | 75JON 03  | 1200             |       |     | OES    | 75JON 07  |
| 3700             | 200   |     | ITNA   | 79REN 03  | 1200             |       |     | OES    | 75JON 02  |
| 3794             | 143   | 11  | ICPES  | 81MUN 01  | 1200             | 20    | 11  | ICPES  | 82JON 01  |
| 3800             |       |     | OES    | 75JON 04  | 1200             | 30    | 11  | ICPES  | 82JON 01  |
| 3850             | 80    | 11  | ICPES  | 82JON 01  | 1200             | 70    |     | ICPES  | 85LYO 01  |
| 3900             | 200   |     | ICPES  | 85WHI 02  | 1200             | 100   |     | ICPES  | 85WHI 02  |
| 3910             |       |     | CPXRF  | 84KAU 01  | 1200             | 200   |     | ITNA   | 80SLO 01  |
| 4000             |       |     | OES    | 75JON 01  | 1300             |       |     | OES    | 75JON 03  |
| 4000             | 100   |     | ITNA   | 80SLO 01  | 1330             |       |     | ITNA   | 84GLA 11  |
| 4400             |       |     | OES    | 75JON 02  | 1400             |       |     | OES    | 75JON 08  |
| 5100             |       |     | OES    | 75JON 06  | 1500             |       |     | OES    | 75JON 11  |
| 5100             |       |     | ITNA   | 84GLA 11  | 1500             | 200   |     | ITNA   | 77NAD 02  |
| 5800             |       |     | OES    | 75JON 11  | 1600             |       |     | OES    | 75JON 05  |
| 6500             |       |     | OES    | 75JON 07  | 1700             |       |     | OES    | 75JON 04  |
| 9100             |       |     | EXRF   | 81PAR 01  | 2200             | 600   |     | CPXRF  | 80KIR 01  |
| <u>La (ng/g)</u> |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 130              | 20    |     | RTNA   | 80SLO 01  | 174              |       |     | ICPES  | 81GOO 01  |
| 140              | 10    |     | ITNA   | 77NAD 02  | 430              |       |     | OES    | 75JON 09  |
| 141              | 22    |     | RTNA   | 83TJI 01  | 448              |       |     | OES    | 75JON 01  |
| 190              | 13    |     | ITNA   | 85GAU 04  | 567              |       |     | OES    | 75JON 06  |
| 210              | 30    |     | ITNA   | 79REN 03  | 570              |       |     | OES    | 75JON 02  |
|                  |       |     |        |           | 580              |       |     | OES    | 75JON 04  |
|                  |       |     |        |           | 588              |       |     | OES    | 75JON 03  |
|                  |       |     |        |           | 602              | 59    | 11  | ICPES  | 81MUN 01  |
|                  |       |     |        |           | 610              |       |     | ICPES  | 84NAD 01  |
|                  |       |     |        |           | 652              | 14    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 652              | 15    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 654              | 20    |     | AA     | 77GUZ 01  |
|                  |       |     |        |           | 655              | 13    | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 657              | 7     | 11  | ICPES  | 82JON 01  |
|                  |       |     |        |           | 660              | 28    |     | ITNA   | 77NAD 02  |
|                  |       |     |        |           | 668              |       |     | OES    | 75JON 05  |
|                  |       |     |        |           | 668              | 20    |     | AA     | 83RAP 01  |
|                  |       |     |        |           | 669              | 48    |     | XRF    | 83PEL 01  |
|                  |       |     |        |           | 670              | 6     |     | ICPES  | 79HER 01  |
|                  |       |     |        |           | 671              | 2     |     | ICPES  | 83SCH 04  |
|                  |       |     |        |           | 673              | 10    |     | DCPES  | 79REE 01  |
| <u>Lu (ng/g)</u> |       |     |        |           |                  |       |     |        |           |
| 1.2              | 0.2   |     | RTNA   | 83TJI 01  |                  |       |     |        |           |
| 1.3              | 0.3   |     | RTNA   | 80SLO 01  |                  |       |     |        |           |
| 2.2              | 0.5   |     | ITNA   | 85GAU 04  |                  |       |     |        |           |

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Mn (ug/g) cont.</u> |       |     |        |           | <u>Na (ug/g) cont.</u> |       |     |        |           |
| 673                    | 10    | D   | DCPES  | 81REE 01  | 56                     |       |     | ITNA   | 84GLA 11  |
| 676                    | 0.7   |     | ICPES  | 84FOG 01  | 70                     |       |     | OES    | 75JON 11  |
| 677                    | 12    |     | VV     | 80SCH 05  | 71                     |       |     | ITNA   | 84GLA 02  |
| 677                    | 12    | D   | ICPES  | 80SCH 08  | 78                     |       |     | OES    | 75JON 08  |
| 678                    | 7     |     | ICPES  | 81KNA 01  | 100                    |       |     | OES    | 75JON 01  |
| 685                    | 15    |     | ITNA   | 80SLO 01  | 100                    |       |     | OES    | 75JON 05  |
| 686                    |       |     | CPXRF  | 84KAU 01  | 105                    | 16    | 11  | ICPES  | 81MUN 01  |
| 686                    | 53    |     | ICPES  | 85LYO 01  | 190                    |       |     | OES    | 75JON 04  |
| 688                    |       | 11  | AA     | 79HOE 02  | <u>Nd (ng/g)</u>       |       |     |        |           |
| 690                    | 20    |     | ITNA   | 85GAU 04  | 128                    | 53    |     | RTNA   | 83TJI 01  |
| 693                    | 6     |     | ICPES  | 85WHI 02  | 200                    | 100   |     | RTNA   | 80SLO 01  |
| 698                    |       | 11  | AA     | 79HOE 02  | <u>Ni (ug/g)</u>       |       |     |        |           |
| 700                    | 100   |     | ITNA   | 79REN 03  | 2.07                   | 0.07  | 11  | ICPES  | 82JON 01  |
| 719                    | 13    | 11  | ICPES  | 81MUN 01  | 2.2                    | 0.1   | 11  | ICPES  | 82JON 01  |
| 727                    |       |     | XRF    | 80SUZ 02  | 2.2                    | 0.2   |     | ITNA   | 77NAD 02  |
| 738                    |       |     | OES    | 75JON 08  | 2.24                   | 0.06  | 11  | ICPES  | 82JON 01  |
| 885                    |       |     | OES    | 75JON 07  | 2.3                    |       |     | ICPES  | 85JON 01  |
| 2200                   |       |     | EXRF   | 81PAR 01  | 2.3                    | 0.2   |     | ICPES  | 79HER 01  |
| <u>Mo (ug/g)</u>       |       |     |        |           | 2.3                    | 0.2   |     | RTNA   | 80SLO 01  |
| 0.1                    |       |     | RTNA   | 80SLO 01  | 2.31                   |       |     | CPXRF  | 84KAU 01  |
| 0.1                    | 0.1   | 11  | ICPES  | 82JON 01  | 2.39                   | 0.09  | 11  | ICPES  | 82JON 01  |
| 0.13                   | 0.06  | 11  | ICPES  | 82JON 01  | 2.4                    | 0.5   | 11  | ICPES  | 81MUN 01  |
| 0.2                    | 0.1   | 11  | ICPES  | 82JON 01  | 2.63                   |       |     | VOLT   | 81PIH 01  |
| 0.2                    | 0.1   | 11  | ICPES  | 82JON 01  | 2.7                    | 1.1   |     | CPXRF  | 80KIR 01  |
| 1.5                    |       |     | OES    | 75JON 11  | 2.9                    | 0.1   |     | DCPES  | 79REE 01  |
| 1.7                    |       |     | OES    | 75JON 01  | 2.9                    | 0.1   | D   | DCPES  | 81REE 01  |
| 2.5                    |       |     | OES    | 75JON 07  | 3.3                    | 0.07  |     | AA     | 83RAP 01  |
| 3.6                    |       |     | OES    | 75JON 03  | 3.7                    | 0.2   |     | ICPES  | 84FOG 01  |
| 18.5                   |       |     | OES    | 75JON 02  | 4                      |       |     | FAA    | 82HOE 01  |
| <u>N (%)</u>           |       |     |        |           | <u>P (ug/g)</u>        |       |     |        |           |
| 1.11                   | 0.01  |     | CB     | 80SCH 02  | 900                    |       |     | ICPES  | 84NAD 01  |
| 1.2                    | 0.14  |     | CB     | 82GLA 02  | 1000                   |       |     | OES    | 75JON 04  |
| 1.3                    | 0.2   | 35  | TCGS   | 79GLA 04  | 1000                   | 300   |     | CPXRF  | 80KIR 01  |
| <u>Na (ug/g)</u>       |       |     |        |           | 1100                   |       |     | ICPES  | 79EDI 01  |
| 18                     |       |     | OES    | 75JON 06  | 1100                   |       |     | OES    | 75JON 09  |
| 18                     | 4     | 11  | ICPES  | 81MUN 01  | 1100                   |       |     | ICPES  | 81GOO 01  |
| 20                     |       |     | OES    | 75JON 03  | 1100                   |       |     | FAA    | 79EDI 01  |
| 23                     |       |     | ICPES  | 84NAD 01  | 1100                   | 50    |     | ICPES  | 84FOG 01  |
| 26                     |       |     | ICPES  | 81GOO 01  | 1100                   | 100   |     | CPAA   | 83MAS 02  |
| 26                     | 4     |     | ITNA   | 77NAD 02  | 1146                   | 120   | 11  | ICPES  | 81MUN 01  |
| 26                     | 9     |     | ICPES  | 85WHI 02  | 1155                   | 41    | 11  | ICPES  | 81MUN 01  |
| 30                     |       |     | OES    | 75JON 09  | 1170                   | 40    | 11  | ICPES  | 82JON 01  |
| 37                     | 4     |     | ITNA   | 85GAU 04  | 1170                   | 50    |     | ICPES  | 81OWE 01  |
| 40                     |       |     | ITNA   | 79REN 03  | 1180                   | 10    |     | ICPES  | 79HER 01  |

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

| Conc                  | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>P (ug/g) cont.</u> |       |     |        |           | <u>Pd (ng/g)</u> |       |     |        |           |
| 1190                  | 20    | 11  | ICPES  | 82JON 01  |                  |       |     |        |           |
| 1190                  | 50    | 11  | ICPES  | 82JON 01  | <                | 2     | L   | RTNA   | 81BYR 01  |
| 1200                  |       |     | OES    | 75JON 05  | <                | 2     |     | RTNA   | 85BEM 01  |
| 1200                  | 100   |     | ICPES  | 85WHI 02  |                  |       |     |        |           |
| 1260                  | 20    | 11  | ICPES  | 82JON 01  | <u>Pr (ng/g)</u> |       |     |        |           |
| 1290                  |       |     | CPXRF  | 84KAU 01  |                  |       |     |        |           |
| 1300                  |       |     | OES    | 75JON 06  | <                | 70    | L   | RTNA   | 80SLO 01  |
| 1300                  |       |     | OES    | 75JON 08  |                  |       |     |        |           |
| 1300                  | 100   |     | ICPES  | 85LYO 01  | <u>Rb (ug/g)</u> |       |     |        |           |
| 1400                  |       |     | OES    | 75JON 07  |                  |       |     |        |           |
| 1400                  |       |     | OES    | 75JON 11  | 10.8             |       |     | CPXRF  | 84KAU 01  |
| 1410                  | 80    |     | FAA    | 84KUB 01  | 10.8             | 0.5   |     | ITNA   | 85GAU 04  |
| 1600                  |       |     | OES    | 75JON 02  | 11               | 0.2   |     | ITNA   | 77NAD 02  |
| 1800                  |       |     | OES    | 75JON 03  | 12.22            | 0.85  |     | ITNA   | 77GUZ 01  |
| 2100                  |       |     | OES    | 75JON 01  | 12.5             | 3.9   |     | ITNA   | 79REN 03  |
|                       |       |     |        |           | 13.1             | 2.6   |     | CPXRF  | 80KIR 01  |
|                       |       |     |        |           | 35               |       |     | EXRF   | 81PAR 01  |
| <u>Pb (ug/g)</u>      |       |     |        |           | <u>S (ug/g)</u>  |       |     |        |           |
| 7.4                   | 1.3   |     | CPXRF  | 80KIR 01  |                  |       |     |        |           |
| 8                     | 1     |     | XRF    | 85AVA 01  |                  |       |     |        |           |
| 9.6                   | 0.4   | 11  | ICPES  | 82JON 01  | 580              | 140   |     | CPXRF  | 79REN 02  |
| 9.8                   |       |     | FAA    | 80PRE 01  | 1200             | 250   |     | CB     | 84GLA 11  |
| 9.8                   | 0.3   | 11  | ICPES  | 82JON 01  | 1220             | 70    |     | CB     | 86GAU 01  |
| 10.2                  |       | 6   | FAA    | 84FUD 01  | 1240             |       | D   | CB     | 85JAC 01  |
| 10.3                  |       |     | CPXRF  | 84KAU 01  | 1240             | 30    | 6   | CB     | 84JAC 01  |
| 10.4                  |       |     | ASV    | 82GAJ 01  | 1250             | 40    |     | CB     | 86BOW 01  |
| 10.4                  |       |     | FAA    | 82PRE 01  | 1290             |       |     | CPXRF  | 84KAU 01  |
| 10.5                  |       | 6   | FAA    | 82KOI 01  | 1290             |       | D   | CB     | 85JAC 01  |
| 10.5                  |       | 6   | FAA    | 81HIN 01  | 1290             | 50    | 6   | CB     | 84JAC 01  |
| 10.6                  |       | 6   | FAA    | 84FUD 01  | 1400             | 100   |     | ICPES  | 85WHI 02  |
| 10.6                  | 0.3   |     | AA     | 83RAP 01  | 1490             | 40    |     | WXRF   | 86BOW 01  |
| 10.6                  | 0.3   |     | IDMS   | 83BRO 01  | 1500             | 300   |     | CPXRF  | 80KIR 01  |
| 10.7                  | 2     |     | AA     | 84KAN 01  |                  |       |     |        |           |
| 10.8                  |       |     | FAA    | 83HOE 01  | <u>Sb (ng/g)</u> |       |     |        |           |
| 10.8                  |       |     | AA     | 82WIL 04  |                  |       |     |        |           |
| 10.8                  | 0.6   |     | ICPES  | 84FOG 01  | 180              | 10    |     | ITNA   | 77NAD 02  |
| 10.8                  | 0.6   |     | FAA    | 80LEG 01  | 180              | 14    |     | HAA    | 79VIJ 01  |
| 10.9                  | 0.3   |     | FAA    | 81KNA 01  | 185              | 2     |     | RTNA   | 79HOE 01  |
| 10.93                 | 0.91  |     | ASV    | 80SZY 01  | 185              | 60    |     | AA     | 83RAP 01  |
| 11                    |       | 6   | FAA    | 82KOI 01  | 187              | 7     |     | HAA    | 78KUB 02  |
| 11                    |       | 6   | FAA    | 81HIN 01  | 189              | 17    |     | ITNA   | 85GAU 04  |
| 11                    |       | 11  | FAA    | 79HOE 02  | 190              | 10    |     | RTNA   | 80SLO 01  |
| 11                    | 0.6   |     | FAA    | 79DAB 02  | 198              | 3     |     | RTNA   | 80KOS 02  |
| 11                    | 1     |     | ICPES  | 79HER 01  | 220              | 10    | 7   | RTNA   | 77GIL 03  |
| 11.1                  | 0.3   |     | AA     | 80SCH 05  | 220              | 10    | 7   | RTNA   | 80GAL 02  |
| 11.1                  | 0.3   | D   | FAA    | 80SCH 08  | 220              | 20    | 7   | RTNA   | 77GIL 03  |
| 11.2                  |       | 11  | FAA    | 79HOE 02  | 220              | 20    | 7   | RTNA   | 80GAL 02  |
| 11.2                  |       |     | FAA    | 82HOE 01  | 1140             | 440   |     | ITNA   | 79REN 03  |
| 11.2                  | 1.1   |     | HAA    | 82WEI 01  |                  |       |     |        |           |
| 11.9                  | 1.1   | 11  | ICPES  | 81MUN 01  |                  |       |     |        |           |
| 13.9                  | 1.2   |     | FAA    | 82WEI 01  |                  |       |     |        |           |
| 14.6                  | 3.4   | 11  | ICPES  | 81MUN 01  |                  |       |     |        |           |
| 33                    |       |     | EXRF   | 81PAR 01  |                  |       |     |        |           |

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sc (ng/g)</u> |       |     |        |           | <u>Th (ng/g)</u> |       |     |        |           |
| 27               | 4     |     | ITNA   | 77GUZ 01  | 34               | 1     |     | ITNA   | 77NAD 02  |
| 38.7             | 0.6   |     | ITNA   | 86GAU 01  | 35               | 5     |     | RTNA   | 80SLO 01  |
| 39               | 2     |     | ITNA   | 84GLA 11  | 50               | 12    |     | ITNA   | 85GAU 04  |
| 42               | 2     |     | ITNA   | 77NAD 02  | <u>Ti (ug/g)</u> |       |     |        |           |
| 45               | 6     |     | ITNA   | 85GAU 04  | 13.7             |       |     | CPXRF  | 84KAU 01  |
| 53               | 8     |     | ITNA   | 79REN 03  | <u>TL (ng/g)</u> |       |     |        |           |
| 130              |       |     | RTNA   | 80SLO 01  | 27               |       | 11  | ASV    | 84LIE 01  |
| <u>Se (ng/g)</u> |       |     |        |           | 28               |       | 11  | ASV    | 84LIE 01  |
| 43               | 1     | 11  | GC     | 81UCH 02  | 29               |       | 11  | FAA    | 84LIE 01  |
| 43               | 1     | 11  | GC     | 81UCH 02  | 30               |       | 11  | ASV    | 84LIE 01  |
| 44               | 8     |     | ITNA   | 77NAD 02  | 31               |       | 11  | ASV    | 84LIE 01  |
| 50               | 10    |     | RTNA   | 80KNA 01  | <u>U (ng/g)</u>  |       |     |        |           |
| 53               | 10    | 9   | ITNA   | 80WAN 01  | 13               | 2     |     | RTNA   | 80SLO 01  |
| 96               | 16    |     | RTNA   | 82POL 01  | 15               |       |     | DNA    | 84GLA 02  |
| <u>Si (ug/g)</u> |       |     |        |           | 15               | 0.5   |     | RTNA   | 78DER 01  |
| 248              | 36    |     | CPXRF  | 80KIR 01  | 18               | 2     |     | DNA    | 86GAU 01  |
| 1380             |       |     | CPXRF  | 84KAU 01  | 18               | 6     | 35  | DNA    | 80GLA 04  |
| <u>Sm (ng/g)</u> |       |     |        |           | 20               | 4     |     | DNA    | 85GAU 04  |
| 18               | 1     |     | RTNA   | 83TJI 01  | 20               | 48    | R   | DNA    | 81GLA 03  |
| 20               | 2     |     | RTNA   | 80SLO 01  | <u>V (ng/g)</u>  |       |     |        |           |
| 21               | 2     |     | ITNA   | 85GAU 04  | 99               | 14    | 11  | RTNA   | 82HEY 02  |
| 130              | 120   |     | ITNA   | 79REN 03  | 248              | 6     | 11  | RTNA   | 82HEY 02  |
| <u>Sr (ug/g)</u> |       |     |        |           | 346              | 18    |     | RTNA   | 78BYR 01  |
| 4.45             |       |     | CPXRF  | 84KAU 01  | 347              | 27    | 11  | RTNA   | 82HEY 02  |
| 4.7              | 0.2   |     | AF     | 81HOR 01  | 370              | 90    | 11  | ICPES  | 82JON 01  |
| 4.75             | 0.1   |     | ICPES  | 84FOG 01  | 410              | 60    | 11  | ICPES  | 82JON 01  |
| 4.9              | 0.1   |     | ICPES  | 79HER 01  | 450              |       |     | ITNA   | 85GAU 04  |
| 5                |       |     | OES    | 75JON 03  | 453              | 61    |     | ITNA   | 82HEY 02  |
| 5.4              |       |     | IENA   | 85GAU 04  | 470              | 80    |     | ITNA   | 77NAD 02  |
| 5.5              | 0.57  |     | CPXRF  | 80KIR 01  | <u>W (ng/g)</u>  |       |     |        |           |
| 10               |       |     | OES    | 75JON 04  | 50               | 10    |     | RTNA   | 80SLO 01  |
| 20               |       |     | OES    | 75JON 01  | <u>Yb (ng/g)</u> |       |     |        |           |
| <u>Ta (ng/g)</u> |       |     |        |           | 9                | 1     |     | RTNA   | 83TJI 01  |
| 13               | 4     |     | ITNA   | 85GAU 04  | 26               | 8     |     | ITNA   | 85GAU 04  |
| 1740             | 270   |     | ITNA   | 79REN 03  | <u>Tb (ng/g)</u> |       |     |        |           |
| <u>Tb (ng/g)</u> |       |     |        |           | 2                | 1     |     | RTNA   | 83TJI 01  |
| 2                | 1     |     | RTNA   | 83TJI 01  | 60               | 10    |     | RTNA   | 80SLO 01  |
| 60               | 10    |     | RTNA   | 80SLO 01  |                  |       |     |        |           |

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

| Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g)</u> |       |     |        |           |
| 5                |       |     | OES    | 75JON 09  |
| 51               | 9     |     | CPXRF  | 79REN 02  |
| 52               | 1     |     | ITNA   | 77NAD 02  |
| 53.5             | 2     |     | RTNA   | 80SLO 01  |
| 56               |       |     | ICPES  | 84NAD 01  |
| 57               |       |     | OES    | 75JON 11  |
| 59.2             |       |     | CPXRF  | 84KAU 01  |
| 60               | 3     | 11  | ICPES  | 82JON 01  |
| 60.3             | 1.3   |     | RTNA   | 77DER 01  |
| 61               | 4     | 11  | ICPES  | 82JON 01  |
| 63               | 3     | 11  | ICPES  | 82JON 01  |
| 64               | 4     | 11  | ICPES  | 82JON 01  |
| 64               | 7     |     | ICPES  | 79HER 01  |
| 65               |       |     | AA     | 81ARA 01  |
| 65               | 4     | 11  | ICPES  | 82JON 01  |
| 65               | 4.6   |     | XRF    | 83PEL 01  |
| 65               | 6     |     | ITNA   | 79REN 03  |
| 66               |       |     | OES    | 75JON 06  |
| 67               |       |     | XRF    | 80SUZ 02  |
| 68               |       |     | OES    | 75JON 08  |
| 68               | 5     | 11  | ICPES  | 82JON 01  |
| 69               | 8.8   |     | ICPES  | 85LYO 01  |
| 71               | 1     |     | DCPES  | 79REE 01  |
| 71               | 1     | D   | DCPES  | 81REE 01  |
| 71               | 10    | 11  | ICPES  | 82JON 01  |
| 72               |       |     | OES    | 75JON 02  |
| 72               | 13    |     | ICPES  | 85WHI 02  |
| 74               |       |     | OES    | 75JON 03  |
| 74               | 9     | 11  | ICPES  | 82JON 01  |
| 76               | 2     |     | ICPES  | 83SCH 04  |
| 78               |       |     | ICPES  | 81GOO 01  |
| 82               |       |     | OES    | 75JON 05  |
| 85               |       |     | OES    | 75JON 07  |
| 86               | 21    | 11  | ICPES  | 81MUN 01  |
| 87               |       |     | OES    | 75JON 01  |
| 99               | 10    | D   | ICPES  | 80SCH 08  |
| 99               | 10    |     | ICPES  | 80SCH 05  |
| 110              | 12    |     | CPXRF  | 80KIR 01  |
| 111              | 39    | 11  | ICPES  | 81MUN 01  |
| 141              |       |     | OES    | 75JON 04  |

TABLE 1577-1: COMPILED DATA FOR NBS SRM 1577 BOVINE LIVER (revised 3/1/86)

| ELE | UNITS | NBS<br>Mean ± SD | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE         | AA            |                 | NAA           |               | ICPES         |            | XRF            |            | OTHER METHODS |         |      |
|-----|-------|------------------|----------------------------|--------|---------------|---------------|-----------------|---------------|---------------|---------------|------------|----------------|------------|---------------|---------|------|
|     |       |                  |                            |        |               | Mean ± SD (n) | Mean ± SD (n)   | Mean ± SD (n) | Mean ± SD (n) | Mean ± SD (n) | Method (n) | Mean (n)       | Method (n) |               |         |      |
| Ag  | ng/g  | 60               | 62 ± 13 (15)               | 65     | 40 - 100      | 66 (2)        | 66 ± 19 (14)    | ---           | ---           | ---           | ---        | ---            | ---        | 65 (1)        | SSMS    |      |
| Al  | ug/g  | ---              | 16 ± 14 (23)               | 8.2    | 0.7 - 45.6    | ---           | 19 ± 15 (15)    | ---           | ---           | 12 ± 12 (5)   | ---        | ---            | ---        | 1.44 (1)      | HPLC    |      |
| As  | ng/g  | 55 ± 5           | 55 ± 6 (53)                | 54     | 40 - 70       | 51 ± 5 (13)   | 55 ± 6 (34)     | ---           | ---           | 50 (1)        | ---        | ---            | ---        | 61.5 (2)      | ASV     |      |
| As  | ng/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | ---           | 100 (1) | GCMS |
| Au  | ng/g  | ---              | 2.8 ± 3.0 (7)              | 1.7    | 0.058 - 7     | ---           | 2.8 ± 3.0 (7)   | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     | ---  |
| B   | ug/g  | ---              | 2.9 ± 0.8 (4)              | 2.34   | 2.24 - 4      | ---           | ---             | ---           | ---           | 4 (1)         | ---        | ---            | ---        | 3.2 (1)       | TCGS    |      |
| Ba  | ug/g  | ---              | 0.94 ± 1.1 (7)             | 0.22   | 0.12 - 2.92   | ---           | 1.3 ± 1.3 (4)   | ---           | ---           | 0.68 (2)      | ---        | ---            | ---        | 0.15 (1)      | SSMS    |      |
| Be  | ng/g  | 17               | 4 (2)                      | ---    | 3 - 5         | 5 (1)         | ---             | ---           | ---           | 3.0 (1)       | ---        | ---            | ---        | ---           | ---     |      |
| Bi  | ng/g  | ---              | 150 (1)                    | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | ---           | 150 (1) | AF   |
| Br  | ug/g  | ---              | 9.1 ± 0.9 (44)             | 9      | 7.35 - 11.1   | ---           | 9.1 ± 0.9 (30)  | ---           | ---           | ---           | ---        | 9.3 ± 0.9 (13) | ---        | ---           | ---     |      |
| C   | %     | ---              | 50.6 ± 1.1 (4)             | 49.87  | 49.6 - 52     | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| Ca  | ug/g  | 124 ± 6          | 122 ± 14 (57)              | 123    | 87 - 151      | 118 ± 12 (12) | 122 ± 14 (14)   | ---           | ---           | 126 ± 10 (13) | ---        | 123 ± 28 (11)  | ---        | 49.74 (2)     | CB      |      |
| Ca  | ug/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 128 (1)       | FAE     |      |
| Cd  | ng/g  | 270 ± 40         | 281 ± 21 (111)             | 283    | 230 - 337     | 281 ± 21 (55) | 284 ± 18 (24)   | ---           | ---           | 320 ± 40 (9)  | ---        | ---            | ---        | 108 (1)       | CPAA    |      |
| Cd  | ng/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 258 ± 30 (10) | ASV     |      |
| Cd  | ng/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 290 ± 30 (3)  | AF      |      |
| Cd  | ng/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 300 (1)       | VOLT    |      |
| Cd  | ng/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 390 (2)       | DCPES   |      |
| Ce  | ng/g  | ---              | 20 ± 4 (5)                 | 21.5   | 13 - 25       | ---           | 22 ± 3 (4)      | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| Cl  | ug/g  | 2700             | 2680 ± 140 (31)            | 2685   | 2410 - 3000   | ---           | 2680 ± 120 (22) | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| Co  | ng/g  | 180              | 230 ± 40 (68)              | 233    | 160 - 310     | 220 ± 39 (9)  | 229 ± 36 (46)   | ---           | ---           | 3 (1)         | ---        | ---            | ---        | ---           | ---     |      |
| Co  | ng/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| Co  | ng/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| Cr  | ng/g  | 88 ± 12          | 116 ± 52 (49)              | 123    | 22 - 280      | 94 ± 50 (9)   | 125 ± 50 (30)   | ---           | ---           | 62 ± 36 (3)   | ---        | 180 (1)        | ---        | 195 (1)       | AE±AF   |      |
| Cr  | ng/g  | ---              | 17 ± 7 (19)                | 16     | 9 - 35        | ---           | 16 ± 6 (16)     | ---           | ---           | ---           | ---        | ---            | ---        | 200 ± 11 (5)  | ASV     |      |
| Cu  | ug/g  | 193 ± 10         | 190 ± 9 (164)              | 190    | 161 - 216     | 192 ± 7 (46)  | 190 ± 8 (47)    | ---           | ---           | 190 ± 9 (21)  | ---        | 187 ± 12 (24)  | ---        | 182 (2)       | SSMS    |      |
| Cu  | ug/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 187 (2)       | CPAA    |      |
| Cu  | ug/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 197 ± 8 (3)   | HPLC    |      |
| Cu  | ug/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| Dy  | ng/g  | ---              | 2.9 (2)                    | ---    | 2.4 - 3.4     | ---           | 2.9 (2)         | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| Er  | ng/g  | ---              | 0.5 (1)                    | ---    | ---           | ---           | 0.5 (1)         | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| Eu  | ng/g  | ---              | 0.33 ± 0.06 (5)            | 0.35   | 0.235 - 0.400 | ---           | 0.33 ± 0.06 (5) | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| F   | ng/g  | ---              | 80 (2)                     | ---    | 40 - 120      | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| Fe  | ug/g  | 268 ± 8          | 265 ± 18 (135)             | 265    | 205 - 315     | 265 ± 17 (28) | 267 ± 15 (41)   | ---           | ---           | 261 ± 12 (21) | ---        | 263 ± 19 (22)  | ---        | 256 (1)       | OES     |      |
| Fe  | ug/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 275 (2)       | SSMS    |      |
| Fe  | ug/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 275 (2)       | HPLC    |      |
| Fe  | ug/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 266 (2)       | DCPES   |      |
| Fe  | ug/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | ---           | ---     |      |
| Fe  | ug/g  | ---              | ---                        | ---    | ---           | ---           | ---             | ---           | ---           | ---           | ---        | ---            | ---        | 280 (2)       | CPAA    |      |

TABLE 1577-1: COMPILEO DATA FOR NBS SRM 1577 BOVINE LIVER (cont.)

| ELE | UNITS | NBS<br>Mean ± SD | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE         | AA<br>Mean ± SD (n) | MAA<br>Mean ± SD (n) | ICPES<br>Mean ± SD (n) | XRF<br>Mean ± SD (n) | OTHER METHODS        |                 |
|-----|-------|------------------|----------------------------|--------|---------------|---------------------|----------------------|------------------------|----------------------|----------------------|-----------------|
|     |       |                  |                            |        |               |                     |                      |                        |                      | Mean ± SD (n) Method | Mean (n) Method |
| Ga  | ng/g  | ---              | 4 (1)                      | ---    | ---           | ---                 | 4 (1)                | ---                    | ---                  | ---                  | ---             |
| Gd  | ng/g  | ---              | 2.1 (2)                    | ---    | 1.8 - 2.4     | ---                 | 2.1 (2)              | ---                    | ---                  | ---                  | ---             |
| Ge  | ng/g  | ---              | < 400                      | ---    | ---           | ---                 | ---                  | ---                    | < 400                | ---                  | ---             |
| H   | %     | ---              | 6.97 ± 0.16 (3)            | 7      | 6.8 - 7.12    | ---                 | ---                  | ---                    | ---                  | 7.12 (1) CB          | 6.9 (2) TCGS    |
| Hf  | ng/g  | ---              | 4.15 (2)                   | ---    | 1 - 7.3       | ---                 | 4.15 (2)             | ---                    | ---                  | ---                  | ---             |
| Hg  | ng/g  | 16 ± 2           | 16.4 ± 1.6 (43)            | 16     | 13.7 - 20     | 16.3 ± 1.7 (18)     | 16.2 ± 1.0 (22)      | ---                    | ---                  | ---                  | 15 (1) MPOES    |
| Ho  | ng/g  | ---              | 0.25 ± 0.05 (3)            | 0.25   | 0.2 - 0.3     | ---                 | 0.25 ± 0.05 (3)      | ---                    | ---                  | ---                  | ---             |
| I   | ng/g  | 180              | 234 ± 31 (15)              | 237    | 180 - 280     | ---                 | 230 ± 30 (14)        | ---                    | ---                  | ---                  | 280 (1) MS      |
| In  | ng/g  | 50               | 0.07 (2)                   | ---    | 0.05 - 0.09   | ---                 | 0.07 (2)             | ---                    | ---                  | ---                  | ---             |
| K   | %     | 0.97 ± 0.0       | 0.98 ± 0.06 (62)           | 0.9695 | 0.821 - 1.13  | 0.99 ± 0.02 (8)     | 0.98 ± 0.06 (25)     | 0.99 ± 0.06 (5)        | 0.96 ± 0.08 (13)     | 0.97 (1) FE          | 0.96 (1) CPAA   |
| K   | %     | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | 1.00 (1) TCGS        | 0.73 (2) SSMS   |
| La  | ng/g  | ---              | 16 ± 4 (10)                | 17     | 10 - 24.5     | ---                 | 16 ± 4 (10)          | ---                    | ---                  | ---                  | ---             |
| Li  | ng/g  | ---              | 164 (1)                    | ---    | ---           | 164 (1)             | ---                  | ---                    | ---                  | ---                  | ---             |
| Lu  | ng/g  | ---              | 0.039 (2)                  | ---    | 0.039 - 0.039 | ---                 | 0.039 (2)            | ---                    | ---                  | ---                  | ---             |
| Mg  | ug/g  | 604 ± 9          | 608 ± 41 (50)              | 602    | 516 - 700     | 589 ± 17 (15)       | 630 ± 50 (13)        | 610 ± 40 (12)          | 609 (2)              | 700 (1) 14NAA        | 450 (1) SSMS    |
| Mg  | ug/g  | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | 629 (2) OCPES        | 609 (1) AE±AF   |
| Mn  | ug/g  | 10.3 ± 1.0       | 10.2 ± 0.7 (134)           | 10.2   | 8.4 - 12      | 10.4 ± 0.6 (42)     | 10.2 ± 0.5 (39)      | 10.2 ± 0.6 (20)        | 9.9 ± 0.7 (15)       | 11.3 ± 1.0 (3) DCPES | 13 (1) TCGS     |
| Mn  | ug/g  | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | 9.9 (1) COLOR        | 13 (1) AE±AF    |
| Mn  | ug/g  | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | 9.45 (2) SSMS        | 10.2 (1) ASV    |
| Mo  | ug/g  | 3.4              | 3.2 ± 0.4 (58)             | 3.23   | 2.3 - 4.1     | 2.8 ± 0.8 (3)       | 3.3 ± 0.3 (36)       | 3.0 ± 0.7 (5)          | 3.3 ± 0.6 (6)        | 3.39 (1) POL         | 3.15 (2) 14NAA  |
| Mo  | ug/g  | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | 2.0 (1) CPAA         | 2.76 (2) SSMS   |
| Mo  | ug/g  | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | ---                  | 3.36 (2) COLOR  |
| N   | %     | 10.6 ± 0.6       | 10.5 ± 0.2 (5)             | 10.42  | 10.35 - 10.82 | ---                 | ---                  | ---                    | ---                  | 10.42 (1) CB         | 10.59 (1) GRAV  |
| N   | %     | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | 10.38 (2) TCGS       | 10.82 (1) NT    |
| Na  | ug/g  | 2430 ± 130       | 2395 ± 200 (57)            | 2400   | 1940 - 3010   | 2440 ± 90 (9)       | 2390 ± 200 (32)      | 2550 ± 310 (5)         | 2000 (1)             | 2400 (1) FAE         | 2420 (1) FE     |
| Na  | ug/g  | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | 1800 (2) 14NAA       | 3100 (1) TCGS   |
| Nd  | ng/g  | ---              | 14 ± 4 (3)                 | 14.5   | 9 - 18        | ---                 | 14 ± 4 (3)           | ---                    | ---                  | ---                  | ---             |
| Ni  | ng/g  | ---              | 160 ± 80 (12)              | 180    | 50 - 270      | 92 ± 56 (3)         | 190 ± 90 (4)         | 50 (1)                 | ---                  | 227 (1) VOLT         | 200 (1) ASV     |
| Ni  | ng/g  | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | ---                  | 195 (1) GC      |
| P   | %     | 1.1              | 1.13 ± 0.12 (22)           | 1.14   | 0.905 - 1.35  | 1.07 (2)            | 1.2 ± 0.2 (3)        | 1.11 ± 0.10 (12)       | 1.12 ± 0.21 (4)      | 1.1 (1) COLOR        | 1.1 (1) 14NAA   |
| Pb  | ng/g  | 340 ± 80         | 350 ± 50 (69)              | 350    | 240 - 490     | 340 ± 40 (40)       | ---                  | 410 ± 80 (5)           | 360 (2)              | 500 (1) OES          | 280 (2) SSMS    |
| Pb  | ng/g  | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | 343 ± 45 (10) ASV    | 375 (2) POL     |
| Pb  | ng/g  | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | 310 (1) VOLT         | 440 (2) DCPES   |
| Pb  | ng/g  | ---              | ---                        | ---    | ---           | ---                 | ---                  | ---                    | ---                  | ---                  | 330.5 (2) IDMS  |
| Pr  | ng/g  | ---              | 4.2 ± 0.3 (3)              | 4      | 4 - 4.6       | ---                 | 4.2 ± 0.3 (3)        | ---                    | ---                  | ---                  | ---             |
| Pt  | ug/g  | ---              | 70 (1)                     | ---    | ---           | ---                 | 70 (1)               | ---                    | ---                  | ---                  | ---             |
| Pb  | ug/g  | 18.3 ± 1.0       | 18.4 ± 1.2 (58)            | 18.7   | 15.1 - 21.2   | 20 (2)              | 18.3 ± 0.8 (35)      | ---                    | 18.0 ± 1.8 (15)      | 16.6 (2) SSMS        | 16.55 (2) 14NAA |

TABLE 1577-1: COMPILED DATA FOR NBS SRM 1577 BOVINE LIVER (cont.)

| ELE    | UNITS | MBS<br>Mean ± SD | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE       | AA               |                    | MAA             |                  | ICPES           |                | XRF             |            | OTHER METHODS  |  |
|--------|-------|------------------|----------------------------|--------|-------------|------------------|--------------------|-----------------|------------------|-----------------|----------------|-----------------|------------|----------------|--|
|        |       |                  |                            |        |             | Mean ± SD (n)    | Mean ± SD (n)      | Mean ± SD (n)   | Mean ± SD (n)    | Mean ± SD (n)   | Mean ± SD (n)  | Mean ± SD (n)   | Method (n) |                |  |
| S      | ug/g  | ---              | 7900 ± 1000 (11)           | 7440   | 6300 - 9500 | ---              | ---                | ---             | ---              | 8020 ± 1110 (3) | 8600 ± 900 (4) | 6300            | (1) NH     | 8150 (1) CB    |  |
| S      | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | ---             | ---        | 7200 (2) TCGS  |  |
| Sb     | ng/g  | 5                | 9.6 ± 4.7 (21)             | 10     | 4 - 26      | 5                | (1) 9.4 ± 4.4 (19) | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| Sc     | ng/g  | ---              | 0.9 ± 0.3 (8)              | 1      | 0.4 - 1.2   | ---              | 1.08 ± 0.08 (6)    | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| Se     | ug/g  | 1.1 ± 0.1        | 1.09 ± 0.08 (172)          | 1.1    | 0.9 - 1.3   | 1.08 ± 0.08 (44) | 1.10 ± 0.07 (81)   | 1.02 ± 0.14 (7) | 1.12 ± 0.19 (10) | ---             | ---            | 1.11            | (2) SSMS   | 0.98 (1) GCMS  |  |
| Se     | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | 1.09 ± 0.10 (9) | FLUOR      | 1.14 (2) COLOR |  |
| Se     | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | 1.17 ± 0.10 (3) | CSV        | 0.98 (1) DCPEs |  |
| Se     | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | 1.12 ± 0.02 (6) | ASV        | 1.07 (1) GC-MS |  |
| Se(VI) | ug/g  | ---              | 0.305 (2)                  | ---    | 0.3 - 0.31  | ---              | ---                | ---             | ---              | ---             | ---            | 1.14 ± 0.07 (4) | GC         | ---            |  |
| Se(VI) | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | ---             | ---        | 0.31 (1) COLOR |  |
| Si     | ug/g  | 17               | 17.5 ± 1.3 (3)             | 16.79  | 16.7 - 19   | ---              | 16.7 (2)           | ---             | ---              | ---             | ---            | ---             | ---        | 0.3 (1) GC     |  |
| Sm     | ng/g  | ---              | 1.6 ± 0.3 (7)              | 1.6    | 1 - 2       | ---              | 1.6 ± 0.3 (7)      | ---             | ---              | ---             | ---            | ---             | ---        | 19 (1) SSMS    |  |
| Sn     | ng/g  | ---              | 18 ± 5 (4)                 | 20     | 10 - 21     | 10               | (1) 20.3 ± 0.6 (3) | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| Sr     | ng/g  | 140              | 170 ± 70 (5)               | 160    | 100 - 300   | 160              | (1) 150 (1)        | 230 (2)         | ---              | ---             | ---            | ---             | ---        | 100 (1) SSMS   |  |
| Ta     | ng/g  | ---              | 3 (1)                      | ---    | ---         | ---              | 3 (1)              | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| Tb     | ng/g  | ---              | 0.8 ± 1.0 (3)              | 0.18   | 0.17 - 2    | ---              | 0.8 ± 1.0 (3)      | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| Te     | ng/g  | ---              | 90 (1)                     | ---    | ---         | ---              | 90 (1)             | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| Th     | ng/g  | ---              | 4.9 (2)                    | ---    | 3 - 6.8     | ---              | 4.9 (2)            | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| Ti     | ug/g  | ---              | 2.7 ± 1.5 (6)              | 2      | 0.7 - 4.7   | ---              | ---                | 1.7 (1)         | ---              | ---             | ---            | 3.2             | (1) 14NAA  | 2.0 (1) CPAA   |  |
| Ti     | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | 4.25            | (2) SSMS   | 0.7 (1) COLOR  |  |
| Tl     | ng/g  | 50               | 2 (1)                      | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | ---             | ---        | 2.0 (1) ASV    |  |
| Tm     | ng/g  | ---              | 0.12 (2)                   | ---    | 0.1 - 0.15  | ---              | 0.12 (2)           | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| U      | ng/g  | 0.8              | 1.0 (2)                    | ---    | 0.99 - 1.0  | ---              | 1.0 (2)            | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| V      | ng/g  | ---              | 58 ± 8 (13)                | 60     | 33 - 66.2   | 55               | (1) 61 ± 3 (8)     | 75 (2)          | ---              | ---             | ---            | ---             | ---        | 15 (1) COLOR   |  |
| W      | ng/g  | ---              | 8 ± 5 (5)                  | 5      | 3.8 - 15    | ---              | 9 ± 5 (4)          | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| Y      | ug/g  | ---              | < 1                        | ---    | ---         | ---              | ---                | ---             | < 1              | ---             | ---            | ---             | ---        | ---            |  |
| Yb     | ng/g  | ---              | 0.35 ± 0.11 (3)            | 0.2850 | 0.28 - 0.48 | ---              | 0.35 ± 0.11 (3)    | ---             | ---              | ---             | ---            | ---             | ---        | ---            |  |
| Zn     | ug/g  | 130 ± 13         | 130 ± 7 (188)              | 130    | 112 - 150   | 129 ± 7 (40)     | 129 ± 6 (67)       | 132 ± 6 (24)    | 133 ± 10 (22)    | ---             | ---            | 130             | (1) OES    | 132 (1) GC     |  |
| Zn     | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | 136 ± 6         | (4) DCPEs  | 134 (2) FAE    |  |
| Zn     | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | 129 ± 10        | (3) ASV    | 132 (2) AF     |  |
| Zn     | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | 120 ± 3         | (3) POL    | 136 (1) HPLC   |  |
| Zn     | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | 134.3 ± 0.6     | (3) AE±AF  | 78 (1) 14NAA   |  |
| Zn     | ug/g  | ---              | ---                        | ---    | ---         | ---              | ---                | ---             | ---              | ---             | ---            | 137 ± 10        | (3) SSMS   | 138 (2) CPAA   |  |
| Zr     | ug/g  | ---              | 2.3 ± 1.8 (4)              | 1.6    | 0.09 - 4    | ---              | ---                | ---             | ---              | ---             | ---            | 4               | (1) CPAA   | 1.6 (1) SSMS   |  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Al (ug/g) cont.</u> |       |     |        |           |
| <                | 130   | L   | RTNA   | 76GAU 01  | 34.4                   | 1.4   |     | RTNA   | 80WOI 01  |
| 5                |       | 17  | UU     | 74MAS 01  | 34.6                   |       |     | ICPES  | 84NAD 01  |
| 40               | 8     |     | RTNA   | 79WAR 02  | 37                     | 6     |     | ITNA   | 77ZIK 01  |
| 49               | 16    |     | IENA   | 86CHI 01  | 42                     | 13    |     | ITNA   | 77HAM 01  |
| 51               | 11    |     | RTNA   | 77LIE 01  | 45.6                   |       |     | ITNA   | 73NAD 01  |
| 51               | 11    |     | RTNA   | 75LIE 01  | 65                     |       |     | ITNA   | 78CAP 01  |
| 53               | 17    |     | ITNA   | 86CHI 01  | <u>As (ng/g)</u>       |       |     |        |           |
| 58               | 3     |     | ITNA   | 86GRE 01  | 23                     | 12    |     | HAA    | 82TAM 01  |
| 60               |       |     | ITNA   | 77OSB 01  | 30                     | 15    |     | IENA   | 78WAN 01  |
| 60               | 1     |     | FAA    | 75PIC 01  | 40                     | 10    |     | RTNA   | 75ABU 01  |
| 65               | 5     |     | RTNA   | 80SLO 01  | 40                     | 10    |     | RTNA   | 80SLO 01  |
| 65               | 10    |     | SSMS   | 77PAU 01  | 41                     |       |     | HAA    | 79EVA 01  |
| 66               | 21    |     | ITNA   | 79CHA 04  | 43.3                   |       |     | HAA    | 77IHN 01  |
| 68               | 6     |     | ITNA   | 78BEH 01  | 46                     | 2     |     | RTNA   | 79HOE 01  |
| 72               | 13    |     | AA     | 80JAC 01  | 47                     | 5     |     | HAA    | 82SUB 01  |
| 80               | 6     |     | ITNA   | 79CHA 02  | 49                     | 6     |     | HAA    | 76FIO 01  |
| 91               | 26    |     | ITNA   | 73COR 01  | 50                     |       |     | HAA    | 78WEL 01  |
| 100              | 10    |     | ITNA   | 84ALK 01  | 50                     |       |     | ICPES  | 84MIA 01  |
| 100              | 30    |     | ITNA   | 80MIC 01  | 50                     | 3     |     | ITNA   | 86GRE 01  |
| 194              |       | 17  | UU     | 74MAS 01  | 50                     | 10    |     | HAA    | 80AGE 02  |
| 300              | 100   | 34  | CPXRF  | 78JOL 01  | 50                     | 10    |     | HAA    | 74LOO 01  |
| 400              |       |     | OES    | 75BOL 02  | 52                     | 3     | 34  | HAA    | 78FLA 01  |
| 2000             | 600   |     | RTNA   | 74SCH 03  | 52                     | 3     |     | AA     | 79FLA 02  |
| <u>Al (ug/g)</u> |       |     |        |           | 52                     | 7     |     | ITNA   | 79CHA 02  |
| <                | 3     |     | ITNA   | 86GRE 01  | 52.9                   | 1.9   | H   | RTNA   | 79ORV 01  |
| <                | 15    | L   | ICPES  | 78CAP 01  | 53                     | 2     | 7   | RTNA   | 80GAL 02  |
| <                | 50    |     | CPXRF  | 84KAU 01  | 53                     | 2     | 7   | RTNA   | 81KUC 01  |
| <                | 80    | L   | 14NAA  | 81WIL 01  | 53                     | 2     |     | RTNA   | 84SCH 04  |
| <                | 80    | L   | 14NAA  | 81WIL 02  | 54                     |       |     | RTNA   | 85TIA 01  |
| 0.7              | 0.2   |     | IENA   | 85GLA 02  | 54                     |       | H   | FAE    | 79FEL 01  |
| 1.44             | 0.1   |     | HPLC   | 85BON 01  | 54                     | 2     |     | RTNA   | 79WAR 02  |
| 1.8              | 0.2   |     | ITNA   | 77GOO 01  | 54                     | 2     | 6   | HAA    | 81KAH 01  |
| 2.21             | 0.15  |     | ITNA   | 82EHM 01  | 54                     | 4     | 7   | RTNA   | 80GAL 02  |
| 3.6              |       | 11  | SSMS   | 85VOS 01  | 54                     | 4     |     | RTNA   | 82BYR 01  |
| 5                |       |     | ICPES  | 79MCQ 01  | 54                     | 4     |     | RTNA   | 78GAL 01  |
| 6                | 2     |     | ICPES  | 79ABE 01  | 54                     | 5     |     | RTNA   | 79MAY 01  |
| 6                | 3     |     | ITNA   | 84GLA 02  | 54                     | 5     |     | RTNA   | 74HEN 01  |
| 6.1              |       |     | ITNA   | 84GLA 11  | 55                     | 1     |     | RTNA   | 80BYR 01  |
| 7                |       | 17  | UU     | 74MAS 01  | 55                     | 3     | 7   | RTNA   | 80GAL 02  |
| 8                | 0.6   | 11  | ICPES  | 81BLA 02  | 55                     | 3     |     | RTNA   | 77GIL 03  |
| 8.2              | 0.8   | 11  | ICPES  | 81BLA 02  | 55                     | 3     |     | NAA    | 77GIL 01  |
| 11.3             | 2.9   | 6   | ITNA   | 74HOF 01  | 56                     | 3     | 6   | HAA    | 81KAH 01  |
| 15.3             | 1.1   |     | ITNA   | 80SLO 01  | 56                     | 3     |     | HAA    | 81UTH 01  |
| 20.4             | 2.9   | 6   | ITNA   | 74HOF 01  | 56                     | 4     |     | RTNA   | 77LIE 01  |
| 20.8             | 0.7   |     | RTNA   | 77BUO 01  | 56                     | 4     |     | RTNA   | 75LIE 01  |
| 23.4             | 0.6   |     | RTNA   | 79WAR 02  | 56.6                   | 1.2   |     | RTNA   | 73DAM 01  |
| 23.6             | 2     |     | ITNA   | 79CHA 02  | 56.6                   | 1.2   |     | NAA    | 74HEY 01  |
| 30               | 65    | RD  | ITNA   | 79IMA 03  | 57                     |       |     | ASV    | 78DAV 01  |
| 30               | 65    | R   | ITNA   | 79IMA 01  | 58                     | 3     |     | RTNA   | 79HEI 04  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>As (ng/g) cont.</u> |       |     |        |           | <u>Be (ng/g)</u> |       |     |        |           |
| 58                     | 3     |     | RTNA   | 79ROS 02  | <                | 3     | L   | ICPES  | 82SCH 01  |
| 58.5                   | 9     |     | NAA    | 76GUZ 01  | <                | 60    | L   | ICPES  | 78CAP 01  |
| 59                     |       |     | RTNA   | 75STE 02  | 3                | 1     | 6   | ICPES  | 82SCH 01  |
| 59                     |       | 7   | RTNA   | 81KUC 01  | 5                | 3     |     | FAA    | 75OWE 01  |
| 59                     | 9     |     | AA     | 83RAP 01  | 17               | 4     |     | FLUOR  | 77WIC 01  |
| 60                     | 6     |     | RTNA   | 83DAN 01  | <u>Bi (ng/g)</u> |       |     |        |           |
| 63                     | 4     |     | RTNA   | 74ORV 01  | 150              |       |     |        |           |
| 63                     | 5     |     | RTNA   | 85GAU 04  | <u>Br (ug/g)</u> |       |     |        |           |
| 64                     |       | 17  | UU     | 74MAS 01  | 4.3              |       | 17  | UU     | 74MAS 01  |
| 66                     |       |     | ASV    | 81LEE 01  | 4.7              | 0.8   |     | CPXRF  | 77RIN 01  |
| 66                     | 23    |     | RTNA   | 74SCH 03  | 6.1              | 0.6   |     | CPXRF  | 77WIL 02  |
| 69                     |       | 17  | UU     | 74MAS 01  | 7.35             |       | 17  | UU     | 74MAS 01  |
| 70                     | 10    |     | RTNA   | 83BRA 01  | 7.4              | 0.5   |     | EXRF   | 80DYC 01  |
| 80                     | 30    |     | RTNA   | 77TJI 01  | 7.7              | 0.5   | 5   | ITNA   | 80HOE 01  |
| 100                    |       |     | ITNA   | 77OSB 01  | 7.8              | 0.1   | 5   | IENA   | 79GLA 02  |
| 100                    | 10    |     | GCMES  | 75TAL 01  | 8.0              | 0.1   | 5   | IENA   | 79GLA 02  |
| 150                    |       |     | ICPES  | 80HAA 01  | 8.0              | 0.5   |     | RTNA   | 76GAU 01  |
| 200                    | 300   | 6   | CPXRF  | 77WIL 03  | 8                | 1     |     | RTNA   | 77TJI 01  |
| 280                    | 100   | 34  | CPXRF  | 78JOL 01  | 8.22             | 0.4   |     | RTNA   | 79WAR 02  |
| 290                    | 110   |     | ICPES  | 80HAA 01  | 8.23             | 0.45  |     | IENA   | 86CHI 01  |
| 500                    |       |     | FAA    | 78CAP 01  | 8.4              | 0.6   |     | ITNA   | 84GLA 02  |
| 600                    | 500   | 6   | CPXRF  | 77WIL 03  | 8.5              | 1     |     | ITNA   | 79CHA 02  |
| <u>Au (ng/g)</u>       |       |     |        |           | 8.5              | 1.3   |     | IENA   | 84GLA 11  |
| <                      | 0.5   | L   | RTNA   | 80SLO 01  | 8.5              | 9.9   | R   | ITNA   | 79IMA 01  |
| 0.058                  | 0.013 |     | RTNA   | 82ZEI 01  | 8.5              | 9.9   | RD  | ITNA   | 79IMA 03  |
| 0.083                  | 0.021 |     | RTNA   | 84TJI 01  | 8.56             |       |     | CPXRF  | 84KAU 01  |
| 0.23                   | 0.16  |     | RTNA   | 77TJI 01  | 8.6              | 0.4   |     | NAA    | 78GAN 01  |
| 1.7                    | 0.4   |     | RTNA   | 77KUS 01  | 8.8              | 0.3   |     | ITNA   | 84GLA 11  |
| 4.9                    | 0.8   |     | RTNA   | 74SCH 03  | 8.8              | 0.3   | 5   | ITNA   | 80HOE 01  |
| 6                      | 1     |     | ITNA   | 79CHA 02  | 8.8              | 0.4   |     | EXRF   | 79GIA 01  |
| 7                      | 0.8   |     | RTNA   | 79WAR 02  | 8.8              | 1.4   |     | EXRF   | 77NIE 01  |
| 29.2                   | 2.1   |     | RTNA   | 77NAD 01  | 8.8              | 2.1   |     | ITNA   | 77HAM 01  |
| <u>B (ug/g)</u>        |       |     |        |           | 8.9              |       |     | ITNA   | 77HAM 01  |
| 2.24                   |       | 6   | AE+AF  | 74DAU 01  | 9                |       |     | IENA   | 85GAU 04  |
| 2.34                   |       | 6   | AE+AF  | 74DAU 01  | 9.0              | 0.6   |     | ITNA   | 77JUR 02  |
| 3.2                    | 0.2   |     | TCGS   | 79FAI 01  | 9.0              | 0.6   |     | ITNA   | 78BEH 01  |
| 4                      | 1     |     | ICPES  | 79ABE 01  | 9.0              | 0.9   |     | ITNA   | 86GRE 01  |
| <u>Ba (ug/g)</u>       |       |     |        |           | 9                | 1     |     | CPXRF  | 78VIS 01  |
| <                      | 20    | L   | 14NAA  | 81WIL 02  | 9.3              |       | 1   | IENA   | 79KUC 01  |
| <                      | 30    | L   | ITNA   | 78CAP 01  | 9.3              | 0.8   |     | ITNA   | 80MAE 01  |
| 0.12                   | 0.13  |     | RTNA   | 76GAU 01  | 9.3              | 3     |     | CPXRF  | 79REN 02  |
| 0.13                   |       |     | ICPES  | 78DAH 01  | 9.34             | 0.82  |     | ITNA   | 74DON 01  |
| 0.15                   |       | 11  | SSMS   | 85VOS 01  | 9.37             |       |     | ITNA   | 73NAD 01  |
| 0.22                   | 0.02  |     | RTNA   | 79WAR 02  | 9.4              | 0.4   |     | XRF    | 77SMY 01  |
| 1.24                   |       |     | ICPES  | 84NAD 01  | 9.5              |       |     | ITNA   | 80CRE 01  |
| 1.8                    | 0.39  |     | RTNA   | 77GUI 03  | 9.5              | 1     | 6   | CPXRF  | 77WIL 03  |
| 2.92                   |       |     | ITNA   | 73NAD 01  | 9.6              | 0.7   |     | CPXRF  | 85CLA 01  |
|                        |       |     |        |           | 9.7              |       | 1   | IENA   | 79KUC 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Br (ug/g)</u> |       |     |        |           | <u>Ca (ug/g) cont.</u> |       |     |        |           |
| 9.7              | 0.5   |     | CPXRF  | 84BIS 01  | 119                    | 2     | 1   | AA     | 77UCH 02  |
| 9.8              |       |     | ITNA   | 79KUC 01  | 120                    |       | 11  | SSMS   | 85VOS 01  |
| 9.8              | 0.3   |     | RTNA   | 80WOI 01  | 120                    | 2     | 11  | ICPES  | 82JON 01  |
| 10               | 0.7   |     | CPXRF  | 82ROE 02  | 121                    | 3     | 11  | ICPES  | 82JON 01  |
| 10               | 1     |     | CPXRF  | 80MAE 01  | 122                    |       |     | ICPES  | 80HAA 01  |
| 10.4             |       |     | ITNA   | 82AKA 01  | 122                    | 7     |     | ICPES  | 79MCQ 01  |
| 11               |       |     | ITNA   | 78CAP 01  | 123                    | 5     |     | FAA    | 84HAR 02  |
| 11               | 1     | 5   | ITNA   | 80TOU 01  | 123                    | 17    |     | AA     | 79MCQ 01  |
| 11               | 2.3   |     | CPXRF  | 80KIR 01  | 124                    | 10    |     | ITNA   | 79CHA 02  |
| 11.1             | 1.6   |     | RTNA   | 74SCH 03  | 124.67                 | 8.48  |     | NAA    | 76GUZ 01  |
| 12               | 4     |     | ITNA   | 77ZIK 01  | 125                    | 8     |     | ITNA   | 75PIE 01  |
| 13.4             |       | 17  | UU     | 74MAS 01  | 125                    | 13    |     | RTNA   | 79WAR 02  |
| 22               | 10    |     | ITNA   | 77ZIK 01  | 127                    | 5     |     | AA     | 75HIN 01  |
|                  |       |     |        |           | 127                    | 7     |     | AA     | 80UCH 01  |
|                  |       |     |        |           | 127                    | 12    |     | ICPES  | 79MCQ 02  |
|                  |       |     |        |           | 128                    | 2     |     | FAE    | 83MAR 04  |
|                  |       |     |        |           | 129                    | 12    | 12  | FAA    | 85CAR 02  |
|                  |       |     |        |           | 130                    | 10    |     | ITNA   | 77ZIK 01  |
|                  |       |     |        |           | 130                    | 12    |     | ITNA   | 84ALK 01  |
|                  |       |     |        |           | 130                    | 30    |     | ITNA   | 84GLA 02  |
|                  |       |     |        |           | 131                    |       |     | RTNA   | 75STE 02  |
|                  |       |     |        |           | 131                    | 5     |     | WXRF   | 84ALK 01  |
|                  |       |     |        |           | 131                    | 8     |     | CPXRF  | 78VIS 01  |
|                  |       |     |        |           | 131                    | 9     |     | CPXRF  | 80KIR 01  |
|                  |       |     |        |           | 133                    |       |     | ICPES  | 84NAD 01  |
|                  |       |     |        |           | 134                    | 18    |     | ICPES  | 79ABE 01  |
|                  |       |     |        |           | 134                    | 21    | 12  | FAA    | 85CAR 02  |
|                  |       |     |        |           | 135                    |       | 11  | SSMS   | 85VOS 01  |
|                  |       |     |        |           | 135                    |       |     | ICPES  | 78DAH 01  |
|                  |       |     |        |           | 137.5                  | 18    |     | PAA    | 76KAT 04  |
|                  |       |     |        |           | 140                    |       |     | ICPES  | 78CAP 01  |
|                  |       |     |        |           | 140                    | 7     |     | CPXRF  | 84BIS 01  |
|                  |       |     |        |           | 143                    | 19    |     | CPXRF  | 85CLA 01  |
|                  |       |     |        |           | 143                    | 42    |     | ICPES  | 84BLA 01  |
|                  |       |     |        |           | 150                    |       |     | ITNA   | 84GLA 11  |
|                  |       |     |        |           | 151                    | 7.4   |     | CPXRF  | 81ROB 02  |
|                  |       |     |        |           | 158                    | 15    |     | EXRF   | 80DYC 01  |
|                  |       |     |        |           | 210                    |       |     | CPXRF  | 84KAU 01  |
|                  |       |     |        |           | 309                    |       |     | ITNA   | 78CAP 01  |
|                  |       |     |        |           | <u>Cd (ng/g)</u>       |       |     |        |           |
|                  |       |     |        |           | 200                    |       | 11  | SSMS   | 85VOS 01  |
|                  |       |     |        |           | 210                    | 20    | 11  | ASV    | 84ADE 03  |
|                  |       |     |        |           | 210                    | 42    |     | ASV    | 79STO 01  |
|                  |       |     |        |           | 230                    |       | 11  | FAA    | 75BLO 01  |
|                  |       |     |        |           | 240                    |       | 17  | UU     | 74MAS 01  |
|                  |       |     |        |           | 240                    | 10    |     | FAA    | 82SUZ 01  |
|                  |       |     |        |           | 246                    | 56    |     | NAA    | 76GUZ 01  |
|                  |       |     |        |           | 250                    |       | 11  | FAA    | 75BLO 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cd (ng/g) cont.</u> |       |     |        |           | <u>Cd (ng/g) cont.</u> |       |     |        |           |
| 250                    |       |     | AA     | 78EVA 01  | 280                    | 70    |     | AA     | 83RAP 01  |
| 250                    |       |     | FAA    | 83ATS 01  | 280                    | 70    |     | CPAA   | 85CAN 01  |
| 250                    | 10    | 11  | ASV    | 84ADE 03  | 283                    |       |     | RTNA   | 75HAL 01  |
| 250                    | 20    | 11  | ASV    | 84ADE 03  | 283                    |       | 17  | UU     | 74MAS 01  |
| 250                    | 20    |     | RTNA   | 83BRA 01  | 283                    | 50    |     | FAA    | 79STO 01  |
| 250                    | 20    |     | AF     | 75EPS 01  | 288                    | 26    |     | FAA    | 81ZAU 01  |
| 250                    | 25    |     | AA     | 82EVA 01  | 288                    | 29    |     | RTNA   | 80GRE 01  |
| 250                    | 30    |     | VV     | 79CHA 02  | 288                    | 35    |     | RTNA   | 75LIE 01  |
| 253                    | 24    |     | AE+AF  | 74RAI 02  | 288                    | 35    |     | RTNA   | 77LIE 01  |
| 253                    | 24    |     | FAA    | 82ATS 01  | 290                    |       | 17  | UU     | 74MAS 01  |
| 260                    |       | 11  | ASV    | 81DAN 01  | 290                    |       | 17  | UU     | 74MAS 01  |
| 260                    |       |     | FAA    | 82AKA 01  | 290                    |       | 14  | FAA    | 80CHA 08  |
| 260                    |       |     | FAA    | 75SLA 01  | 290                    |       | 14  | FAA    | 80CHA 08  |
| 260                    | 10    |     | RTNA   | 74ORV 01  | 290                    |       | 11  | ASV    | 81DAN 01  |
| 260                    | 10    |     | FAA    | 84RAB 01  | 290                    |       |     | FAA    | 80JAR 01  |
| 260                    | 20    |     | FAA    | 84ROS 01  | 290                    | 10    |     | FAA    | 80LEG 01  |
| 260                    | 20    | 11  | ASV    | 84ADE 03  | 290                    | 10    |     | AA     | 84HUD 01  |
| 260                    | 20    |     | AA     | 74ULL 01  | 290                    | 10    | D   | AA     | 84HUD 03  |
| 260                    | 20    |     | FAA    | 79DAB 02  | 290                    | 10    |     | RTNA   | 77BAJ 02  |
| 260                    | 30    |     | RTNA   | 74SCH 03  | 290                    | 13    | 7   | AA     | 73TAL 01  |
| 260                    | 30    |     | FAA    | 78PIE 01  | 290                    | 20    |     | NAA    | 76DER 01  |
| 260                    | 30    |     | RTNA   | 80SLO 01  | 290                    | 20    |     | AA     | 79FLA 02  |
| 266                    | 20    |     | FAA    | 74RAI 02  | 290                    | 30    |     | RTNA   | 74HEN 01  |
| 266                    | 27    |     | RTNA   | 79MAY 01  | 290                    | 30    |     | RTNA   | 79DER 01  |
| 269                    | 13    |     | RTNA   | 74ROO 01  | 290                    | 30    |     | FAA    | 79WAR 01  |
| 270                    |       |     | AA     | 77FRI 01  | 290                    | 30    |     | FAA    | 84GLA 02  |
| 270                    |       | 17  | UU     | 74MAS 01  | 290                    | 30    |     | ICPES  | 84BLA 01  |
| 270                    |       | 17  | UU     | 74MAS 01  | 293                    | 9     |     | ITNA   | 86GRE 01  |
| 270                    |       | 17  | UU     | 74MAS 01  | 300                    |       |     | ASV    | 82GAJ 01  |
| 270                    | 2     |     | FAA    | 83STE 05  | 300                    |       |     | ICPES  | 80HAA 01  |
| 270                    | 10    |     | ICPES  | 83SCH 04  | 300                    | 18    | 7   | AA     | 73TAL 01  |
| 270                    | 10    | 11  | AA     | 81BLA 03  | 300                    | 18    |     | FAA    | 74TAL 01  |
| 270                    | 20    | 11  | ASV    | 84ADE 03  | 300                    | 20    |     | RTNA   | 78GAL 01  |
| 270                    | 20    |     | AA     | 85ADE 02  | 300                    | 20    |     | RTNA   | 77TJI 01  |
| 270                    | 20    |     | AA     | 79WAR 01  | 300                    | 20    | 7   | RTNA   | 80GAL 02  |
| 270                    | 20    |     | AA     | 75EPS 01  | 300                    | 20    |     | VOLT   | 84OST 01  |
| 270                    | 30    |     | AA     | 79LAK 01  | 300                    | 23    |     | AF     | 75WOR 01  |
| 270                    | 50    |     | FAA    | 81KNA 01  | 300                    | 25    |     | FAA    | 74TAL 01  |
| 270                    | 60    |     | TCGS   | 79FAI 01  | 300                    | 25    | 7   | AA     | 73TAL 01  |
| 270                    | 80    |     | FAA    | 74GRO 01  | 300                    | 30    |     | RTNA   | 76GAU 01  |
| 275                    | 5     |     | FAA    | 78HUD 01  | 300                    | 40    | 7   | RTNA   | 81KUC 01  |
| 280                    |       |     | ASV    | 74COP 01  | 300                    | 50    |     | AA     | 75HIN 01  |
| 280                    |       |     | FAA    | 82HOE 01  | 300                    | 70    |     | AA     | 80AGE 01  |
| 280                    |       |     | AA     | 84KAN 01  | 300                    | 700   |     | AA     | 76LAN 01  |
| 280                    |       |     | RTNA   | 85TIA 01  | 300                    | 800   | 6   | FAA    | 76LAN 01  |
| 280                    | 20    |     | SSMS   | 77PAU 01  | 310                    |       |     | RTNA   | 75STE 02  |
| 280                    | 30    |     | AA     | 80SCH 05  | 310                    |       | 7   | RTNA   | 81KUC 01  |
| 280                    | 30    | D   | FAA    | 80SCH 08  | 310                    |       | 11  | FAA    | 81DAN 01  |
| 280                    | 50    | 11  | AA     | 81BLA 03  | 310                    |       |     | ICPES  | 85NAR 02  |
| 280                    | 50    |     | ICPES  | 84MIA 01  | 310                    |       |     | AF     | 85NAR 02  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cd (ng/g) cont.</u> |       |     |        |           | <u>Cl (ug/g) cont.</u> |       |     |        |           |
| 310                    | 20    |     | FAA    | 78GRO 01  | 2700                   | 300   |     | ITNA   | 84GLA 11  |
| 310                    | 40    |     | ICPES  | 82AZI 01  | 2715                   | 151   |     | ITNA   | 84ALK 01  |
| 310                    | 50    |     | FAA    | 80POL 01  | 2740                   |       |     | CPXRF  | 84KAU 01  |
| 320                    |       |     | FAA    | 83ATS 01  | 2750                   |       |     | ITNA   | 73NAD 01  |
| 320                    |       | 11  | FAA    | 81DAN 01  | 2750                   | 110   |     | ITNA   | 78FUR 01  |
| 320                    | 40    | 11  | AA     | 81BLA 03  | 2760                   |       |     | ITNA   | 82AKA 01  |
| 320                    | 130   | 6   | FAA    | 76LAN 01  | 2770                   | 40    |     | ITNA   | 86GRE 01  |
| 337                    | 58    |     | RTNA   | 79PLA 01  | 2793                   | 294.4 |     | NAA    | 76GUZ 01  |
| 350                    | 50    | 11  | ICPES  | 82JON 01  | 2800                   | 150   |     | IENA   | 84GLA 11  |
| 360                    | 28    |     | ICPES  | 82EVA 01  | 2830                   | 200   |     | NAA    | 78GAN 01  |
| 380                    | 20    | 6   | DCPES  | 83FRA 01  | 2900                   |       |     | ITNA   | 80CRE 01  |
| 390                    | 70    | 11  | ICPES  | 82JON 01  | 3000                   | 100   |     | TCGS   | 79FAI 01  |
| 400                    | 40    | 6   | DCPES  | 83FRA 01  | 3000                   | 190   |     | ITNA   | 77HAM 01  |
| 550                    | 450   |     | AA     | 79MON 01  | 3200                   | 800   |     | CPXRF  | 79REN 02  |
| 560                    | 130   | 34  | CPXRF  | 78JOL 01  | 3500                   | 200   |     | 14NAA  | 81WIL 02  |
|                        |       |     |        |           | 11663                  |       | 17  | UU     | 74MAS 01  |
| <u>Ce (ng/g)</u>       |       |     |        |           | <u>Co (ng/g)</u>       |       |     |        |           |
| 13                     |       | 17  | UU     | 74MAS 01  |                        |       |     |        |           |
| 18                     | 4     |     | RTNA   | 80SLO 01  | 120                    |       | 17  | UU     | 74MAS 01  |
| 21.5                   |       |     | RTNA   | 77LAU 02  | 160                    | 10    |     | ASV    | 85ADE 01  |
| 22                     |       |     | RTNA   | 82LAU 01  | 162                    |       |     | GC     | 85MEY 02  |
| 25                     | 3     |     | RTNA   | 83TJI 01  | 170                    |       |     | ITNA   | 73NAD 01  |
| 46                     | 14    |     | RTNA   | 76GAU 01  | 170                    | 10    |     | NAA    | 78GAN 01  |
| 74                     | 28    |     | RTNA   | 86TSU 01  | 170                    | 20    |     | ITNA   | 79CHA 02  |
|                        |       |     |        |           | 174                    |       | 17  | UU     | 74MAS 01  |
|                        |       |     |        |           | 178                    |       | 14  | FAA    | 80CHA 08  |
|                        |       |     |        |           | 178                    | 5     |     | RTNA   | 79WAR 02  |
|                        |       |     |        |           | 180                    | 10    |     | RTNA   | 77GIL 03  |
|                        |       |     |        |           | 180                    | 10    |     | NAA    | 77GIL 01  |
|                        |       |     |        |           | 180                    | 30    |     | ITNA   | 79WAR 01  |
|                        |       |     |        |           | 182                    |       | 14  | FAA    | 80CHA 08  |
|                        |       |     |        |           | 188                    | 27    |     | NAA    | 76GUZ 01  |
|                        |       |     |        |           | 190                    |       | 1   | IENA   | 79KUC 01  |
|                        |       |     |        |           | 190                    | 20    | 6   | ITNA   | 74BEC 01  |
|                        |       |     |        |           | 190                    | 20    |     | AA     | 84KAN 01  |
|                        |       |     |        |           | 200                    |       | 11  | SSMS   | 85VOS 01  |
|                        |       |     |        |           | 200                    | 16    |     | FAA    | 74WES 01  |
|                        |       |     |        |           | 200                    | 40    |     | ITNA   | 80LAK 01  |
|                        |       |     |        |           | 203                    |       |     | RTNA   | 75STE 02  |
|                        |       |     |        |           | 210                    |       |     | ITNA   | 79KUC 01  |
|                        |       |     |        |           | 210                    | 10    |     | ITNA   | 86CHI 01  |
|                        |       |     |        |           | 210                    | 20    |     | ITNA   | 74WES 01  |
|                        |       |     |        |           | 210                    | 30    |     | AA     | 79FLA 02  |
|                        |       |     |        |           | 210                    | 40    |     | FAA    | 79WAR 01  |
|                        |       |     |        |           | 217                    | 13    |     | ITNA   | 81KRI 01  |
|                        |       |     |        |           | 220                    |       |     | RTNA   | 75ABU 01  |
|                        |       |     |        |           | 223                    | 11    |     | RTNA   | 75LIE 01  |
|                        |       |     |        |           | 223                    | 11    |     | RTNA   | 77LIE 01  |
|                        |       |     |        |           | 225                    |       | 17  | UU     | 74MAS 01  |
| <u>Cl (ug/g)</u>       |       |     |        |           |                        |       |     |        |           |
| 1880                   |       | 17  | UU     | 74MAS 01  |                        |       |     |        |           |
| 2155                   | 170   | 34  | CPXRF  | 78JOL 01  |                        |       |     |        |           |
| 2410                   | 600   |     | EXRF   | 77NIE 01  |                        |       |     |        |           |
| 2460                   |       | 35  | ITNA   | 81GLA 04  |                        |       |     |        |           |
| 2480                   |       | 17  | UU     | 74MAS 01  |                        |       |     |        |           |
| 2500                   | 130   | 35  | ITNA   | 81GLA 03  |                        |       |     |        |           |
| 2530                   |       |     | ITNA   | 78CAP 01  |                        |       |     |        |           |
| 2542                   | 300   |     | ITNA   | 77ZIK 01  |                        |       |     |        |           |
| 2550                   | 100   |     | ITNA   | 74WES 01  |                        |       |     |        |           |
| 2570                   | 3110  | R   | ITNA   | 79IMA 01  |                        |       |     |        |           |
| 2570                   | 3110  | RD  | ITNA   | 79IMA 03  |                        |       |     |        |           |
| 2590                   |       | 17  | UU     | 74MAS 01  |                        |       |     |        |           |
| 2610                   |       | 17  | UU     | 74MAS 01  |                        |       |     |        |           |
| 2610                   | 200   |     | ITNA   | 79CHA 02  |                        |       |     |        |           |
| 2615                   | 192   |     | RTNA   | 74SCH 03  |                        |       |     |        |           |
| 2632                   | 67    |     | ITNA   | 77GUI 02  |                        |       |     |        |           |
| 2632                   | 67    |     | NAA    | 76MIL 02  |                        |       |     |        |           |
| 2650                   | 100   |     | ITNA   | 80SLO 01  |                        |       |     |        |           |
| 2680                   | 80    |     | RTNA   | 79WAR 02  |                        |       |     |        |           |
| 2685                   | 165   |     | PAA    | 76KAT 04  |                        |       |     |        |           |
| 2690                   | 170   |     | EXRF   | 80DYC 01  |                        |       |     |        |           |
| 2700                   | 70    |     | ITNA   | 84GLA 02  |                        |       |     |        |           |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Co (ng/g) cont.</u> |       |     |        |           | <u>Cr (ng/g)</u> |       |     |        |           |
| 225                    | 7     |     | COLOR  | 82KIR 01  | 22               | 10    |     | ICPES  | 81BLA 01  |
| 230                    | 20    |     | RTNA   | 80SLO 01  | 35               | 3     |     | GC     | 81BLA 01  |
| 230                    | 20    | 6   | ITNA   | 74BEC 01  | 35               | 4     | 11  | FAA    | 80KUM 01  |
| 230                    | 100   |     | ITNA   | 77ZIK 01  | 44.9             | 5     | 11  | RTNA   | 76PIE 01  |
| 233                    | 5     |     | RTNA   | 79DER 01  | 51               |       | 17  | UU     | 74MAS 01  |
| 236                    | 9     |     | ITNA   | 80MIC 01  | 53               | 9     |     | FAA    | 74WOL 01  |
| 240                    |       |     | CHEML  | 79MIL 01  | 60               | 12    |     | AA     | 80JAC 01  |
| 240                    |       |     | ITNA   | 80CRE 01  | 60               | 30    |     | RTNA   | 74SCH 03  |
| 240                    | 10    |     | ITNA   | 73COR 01  | 61               | 3     | 11  | FAA    | 80KUM 01  |
| 240                    | 10    |     | ITNA   | 84ALK 01  | 72               | 8     | 11  | ICPES  | 81BLA 02  |
| 240                    | 14    |     | IENA   | 75MAZ 01  | 72               | 13    |     | ITNA   | 86GRE 01  |
| 240                    | 20    |     | RTNA   | 74HEN 01  | 74               | 5     |     | RTNA   | 77LIE 01  |
| 240                    | 30    |     | ITNA   | 78BEH 01  | 78.9             |       | 11  | NAA    | 79VER 01  |
| 240                    | 37    |     | ITNA   | 77HAM 01  | 80.6             |       | 11  | NAA    | 79VER 01  |
| 245                    |       | 7   | RTNA   | 81KUC 01  | 85               | 9     |     | RTNA   | 78GAL 01  |
| 246                    | 14    |     | RTNA   | 77TJI 01  | 85               | 9     | 7   | RTNA   | 80GAL 02  |
| 247                    | 31    |     | ITNA   | 81MOL 01  | 88               |       | 7   | RTNA   | 81KUC 01  |
| 248                    | 25    |     | ITNA   | 79ZEI 01  | 88               | 8     | 11  | FAA    | 80KUM 01  |
| 250                    |       |     | ITNA   | 82AKA 01  | 92               | 9     | 11  | ICPES  | 81BLA 02  |
| 250                    | 30    |     | CHEML  | 81MAR 01  | 92               | 10    | 7   | RTNA   | 81KUC 01  |
| 252                    | 8     |     | ITNA   | 86GRE 01  | 94               | 8     | 7   | FAA    | 80CHA 01  |
| 257                    | 2     |     | ITNA   | 74LIN 01  | 94.8             | 19.5  | 11  | RTNA   | 76PIE 01  |
| 260                    |       | 17  | UU     | 74MAS 01  | 96               | 8     |     | RTNA   | 79TJI 01  |
| 260                    | 7     | 7   | RTNA   | 81KUC 01  | 98               | 5     |     | RTNA   | 75LIE 01  |
| 260                    | 10    |     | ITNA   | 79SAT 01  | 115              | 42    |     | RTNA   | 79PLA 01  |
| 260                    | 21    |     | RTNA   | 76GAU 01  | 120              | 40    |     | AA     | 79FLA 02  |
| 265                    |       |     | AA     | 79ABU 01  | 120              | 70    |     | ITNA   | 78BEH 01  |
| 269                    | 30    |     | AA     | 80JAC 01  | 123              | 6     |     | RTNA   | 77LIE 01  |
| 275                    |       |     | FAA    | 82HOE 01  | 130              |       | 17  | UU     | 74MAS 01  |
| 280                    |       |     | NAA    | 79MIL 01  | 130              |       |     | ITNA   | 80CRE 01  |
| 290                    |       |     | ITNA   | 78CAP 01  | 130              | 30    |     | RTNA   | 78GOE 01  |
| 300                    |       |     | ICPES  | 80HAA 01  | 130              | 50    |     | RTNA   | 77TJI 01  |
| 300                    |       |     | ITNA   | 77OSB 01  | 133              | 12    |     | ITNA   | 80MIC 01  |
| 300                    |       | 11  | SSMS   | 85VOS 01  | 140              |       | 17  | UU     | 74MAS 01  |
| 300                    | 70    |     | IENA   | 86CHI 01  | 144              | 23    | 7   | FAA    | 80CHA 01  |
| 310                    | 60    |     | RTNA   | 74SCH 03  | 150              |       | 17  | UU     | 74MAS 01  |
| 310                    | 120   |     | 14NAA  | 81WIL 02  | 150              | 10    |     | NAA    | 78GAN 01  |
| 310                    | 120   |     | 14NAA  | 81WIL 01  | 150              | 30    |     | ITNA   | 74DON 01  |
| 340                    |       | 17  | UU     | 74MAS 01  | 160              | 5     | 11  | RTNA   | 78MCC 01  |
| 360                    | 60    |     | ITNA   | 78FUR 01  | 160              | 60    |     | RTNA   | 76GAU 01  |
| 370                    | 60    |     | RTNA   | 77MEL 01  | 163              | 10    |     | RTNA   | 74MCC 01  |
| 390                    |       | 17  | UU     | 74MAS 01  | 180              | 100   |     | CPXRF  | 78VIS 01  |
| 400                    |       |     | FAA    | 75SLA 01  | 190              | 10    |     | FAA    | 79WAR 01  |
| 410                    | 120   |     | RTNA   | 77KUS 01  | 200              | 20    |     | DCPES  | 79REE 01  |
|                        |       |     |        |           | 200              | 20    | D   | DCPES  | 81REE 01  |
|                        |       |     |        |           | 210              | 2     | 11  | RTNA   | 78MCC 01  |
|                        |       |     |        |           | 210              | 30    |     | ITNA   | 78MCC 01  |
|                        |       |     |        |           | 210              | 31    |     | ITNA   | 74MCC 01  |
|                        |       |     |        |           | 210              | 40    |     | ITNA   | 79WAR 01  |
|                        |       |     |        |           | 210              | 70    |     | RTNA   | 79WAR 02  |
|                        |       |     |        |           | 280              | 200   |     | ITNA   | 79SAT 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Cr (ng/g) cont.</u> |       |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| 400                    | 500   | 11  | ICPES  | 82JON 01  | 87               |       | 11  | SSMS   | 85VOS 01  |
| 400                    | 500   | 11  | ICPES  | 82JON 01  | 93               | 12    | 6   | ITNA   | 74HOF 01  |
| 490                    |       | 17  | UU     | 74MAS 01  | 124              |       | 11  | XRF    | 83PEL 01  |
| 500                    | 3500  | R   | ITNA   | 73NAD 01  | 138              | 18.8  |     | FAA    | 74GRO 01  |
| 540                    |       | 17  | UU     | 74MAS 01  | 146              | 40    |     | ITNA   | 77ZIK 01  |
| 600                    |       |     | ITNA   | 79KUC 01  | 148              | 19    |     | FAA    | 77FUJ 01  |
| 870                    | 60    |     | CHEML  | 74LI 01   | 151              | 191   | RD  | ITNA   | 79IMA 03  |
| 1000                   | 400   |     | FAE    | 83MAR 04  | 151              | 191   | R   | ITNA   | 79IMA 01  |
| 1000                   | 600   | 11  | RTNA   | 76STE 01  | 153              |       |     | CPXRF  | 78UEM 01  |
| 1160                   | 600   |     | ITNA   | 76STE 01  | 154              | 7     |     | ICPES  | 85FAS 01  |
| 1300                   |       | 17  | UU     | 74MAS 01  | 154              | 43    |     | CPAA   | 77ZIK 01  |
| 1400                   | 800   | 11  | RTNA   | 76STE 01  | 161              | 12    |     | RTNA   | 77KUS 01  |
| 1570                   |       | 17  | UU     | 74MAS 01  | 167              |       | 17  | UU     | 74MAS 01  |
| 1600                   |       | 11  | SSMS   | 85VOS 01  | 167              |       |     | XRF    | 80SUZ 02  |
| 1600                   | 800   | 11  | RTNA   | 76STE 01  | 168              | 8     | 1   | ICPES  | 78SUD 01  |
| 1700                   | 900   | 11  | RTNA   | 76STE 01  | 169              | 7     | 12  | FAA    | 85CAR 02  |
| 1900                   | 1000  | 11  | RTNA   | 76STE 01  | 170              | 8     |     | RTNA   | 80SLO 01  |
| 2000                   |       | 11  | SSMS   | 85VOS 01  | 173              |       | 17  | UU     | 74MAS 01  |
| 2400                   | 700   |     | CPXRF  | 77WIL 02  | 173.5            | 13.9  | 34  | CPXRF  | 78JOL 01  |
| 2700                   |       |     | FAA    | 83ATS 01  | 173.6            | 18.5  |     | RTNA   | 83DAN 01  |
|                        |       |     |        |           | 174              | 2     |     | EXRF   | 80DYC 01  |
|                        |       |     |        |           | 175              |       | 17  | UU     | 74MAS 01  |
|                        |       |     |        |           | 176              | 9     | 6   | ITNA   | 74HOF 01  |
|                        |       |     |        |           | 177              | 1     |     | AA     | 79MCQ 01  |
|                        |       |     |        |           | 177              | 7     |     | RTNA   | 77TJI 01  |
|                        |       |     |        |           | 177              | 19    | 5   | ITNA   | 80TOJ 01  |
|                        |       |     |        |           | 179              | 19    |     | ICPES  | 84BLA 01  |
|                        |       |     |        |           | 180              |       | 17  | UU     | 74MAS 01  |
|                        |       |     |        |           | 180              | 3     |     | AA     | 73TAL 01  |
|                        |       |     |        |           | 180              | 8     | 11  | ICPES  | 81BLA 02  |
|                        |       |     |        |           | 180              | 15    |     | CPXRF  | 84BIS 01  |
|                        |       | 17  | UU     | 74MAS 01  | 181              |       | 11  | SSMS   | 85VOS 01  |
|                        |       |     | RTNA   | 79WAR 02  | 181              |       | 17  | UU     | 74MAS 01  |
|                        |       |     | ITNA   | 79SAT 01  | 181              | 124   |     | ITNA   | 82KIM 01  |
|                        |       |     | RTNA   | 76GAU 01  | 182              | 6     | 1   | ICPES  | 78SUD 01  |
|                        |       |     | ITNA   | 73COR 01  | 182              | 8     | 7   | RTNA   | 81KUC 01  |
|                        |       | 17  | UU     | 74MAS 01  | 182              | 13    |     | CPXRF  | 81SAI 01  |
|                        |       |     | ITNA   | 86CHI 01  | 183              |       |     | ICPES  | 84NAD 01  |
|                        |       |     | IENA   | 86CHI 01  | 183              | 2     | 7   | RTNA   | 84FAR 02  |
|                        |       |     | ITNA   | 80CRE 01  | 183              | 8     | 35  | RTNA   | 77GLA 01  |
|                        |       |     | ITNA   | 84ALK 01  | 183              | 8     |     | PAA    | 76WIL 01  |
|                        |       |     | ITNA   | 73NAD 01  | 183              | 19    |     | CPXRF  | 79MAN 01  |
|                        |       | 11  | SSMS   | 85VOS 01  | 184              | 5     |     | SSMS   | 77PAU 01  |
|                        |       | 17  | UU     | 74MAS 01  | 184              | 6     | 12  | FAA    | 85CAR 02  |
|                        | 30    |     | RTNA   | 77MEL 01  | 185              |       |     | FAA    | 78CAP 01  |
|                        | 10    | 7   | RTNA   | 80GAL 02  | 185              | 3     | 7   | RTNA   | 84FAR 02  |
|                        |       |     |        |           | 185              | 3.3   | 6   | DCPES  | 83FRA 01  |
|                        |       |     |        |           | 185              | 6.8   | 11  | RTNA   | 74WES 01  |
|                        |       |     |        |           | 185              | 7     |     | RTNA   | 78GAL 01  |
|                        |       |     |        |           | 185              | 7     | 7   | RTNA   | 80GAL 02  |
|                        |       |     |        |           | 185              | 8     |     | FAE    | 83MAR 04  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cu (ug/g) cont.</u> |       |     |        |           | <u>Cu (ug/g) cont.</u> |       |     |        |           |
| 185                    | 9     | 11  | ICPES  | 82JON 01  | 191                    |       | 11  | FAA    | 81DAN 01  |
| 185                    | 14    |     | AA     | 83RAP 01  | 191                    |       | 11  | XRF    | 83PEL 01  |
| 186                    |       |     | ITNA   | 84GLA 11  | 191                    | 6.2   | 11  | RTNA   | 74WES 01  |
| 186                    | 2     |     | ICPES  | 79MCQ 02  | 191                    | 9     |     | CPXRF  | 85CLA 01  |
| 186                    | 5.2   | D   | AA     | 84HUD 03  | 191                    | 10.5  |     | NAA    | 76GUZ 01  |
| 186                    | 5.2   |     | AA     | 84HUD 01  | 191                    | 34    |     | XRF    | 77SMI 04  |
| 186                    | 5.5   | 11  | FAA    | 74WES 01  | 192                    | 4     |     | EXRF   | 79GIA 01  |
| 186                    | 5.5   | 6   | CPXRF  | 77WIL 03  | 192                    | 4     |     | FAA    | 81CLE 02  |
| 186                    | 16    |     | EXRF   | 77NIE 01  | 192                    | 6     |     | ITNA   | 86GRE 01  |
| 187                    |       |     | CPXRF  | 84KAU 01  | 192                    | 8     |     | ICPES  | 80SCH 08  |
| 187                    |       | 7   | RTNA   | 81KUC 01  | 192                    | 9     | 6   | FAA    | 76LAN 01  |
| 187                    | 2     | 2   | FAA    | 84MIL 01  | 192                    | 26    |     | ICPES  | 84ZER 01  |
| 187                    | 2.3   |     | AA     | 80AGE 01  | 193                    |       | 11  | FAA    | 81DAN 01  |
| 187                    | 4     | 11  | ICPES  | 81BLA 02  | 193                    | 1     |     | ICPES  | 85WOL 01  |
| 187                    | 6     |     | ITNA   | 78FUR 01  | 193                    | 10    |     | FAA    | 80LON 01  |
| 187                    | 8     |     | RTNA   | 75LIE 01  | 193                    | 14    |     | RTNA   | 77GIL 03  |
| 187                    | 8     |     | RTNA   | 77LIE 01  | 193                    | 14    |     | NAA    | 77GIL 01  |
| 187                    | 13    |     | ITNA   | 74DON 01  | 193                    | 14    | 7   | RTNA   | 80GAL 02  |
| 187.4                  | 15.5  |     | AA     | 79MON 01  | 194                    |       | 17  | UU     | 74MAS 01  |
| 188                    |       | 11  | XRF    | 83PEL 01  | 194                    |       | 17  | UU     | 74MAS 01  |
| 188                    | 1     |     | ICPES  | 79MCQ 01  | 194                    |       |     | FAA    | 75SLA 01  |
| 188                    | 3     |     | RTNA   | 74HEN 01  | 194                    | 1     |     | AA     | 75ABU 01  |
| 188                    | 6     |     | AA     | 79FLA 02  | 194                    | 3     |     | ASV    | 85ADE 01  |
| 188                    | 6     |     | HPLC   | 85SAI 01  | 194                    | 4     |     | AA     | 82HAR 01  |
| 188                    | 9     |     | AA     | 75HIN 01  | 194                    | 6     |     | ICPES  | 82EVA 01  |
| 188                    | 9.8   | 11  | FAA    | 74WES 01  | 194                    | 13    | 6   | CPXRF  | 77WIL 03  |
| 188                    | 10    |     | RTNA   | 79WAR 02  | 194                    | 31    |     | AA     | 79LAK 01  |
| 188                    | 10    |     | ITNA   | 79WAR 01  | 195                    |       | 6   | POL    | 72SIN 01  |
| 189                    |       |     | ITNA   | 82AKA 01  | 195                    |       |     | AE+AF  | 79ULL 01  |
| 189                    |       | 11  | XRF    | 83PEL 01  | 195                    | 3     |     | AA     | 79WAR 01  |
| 189                    | 2     | 1   | AA     | 77UCH 02  | 195                    | 4     |     | AA     | 80UCH 01  |
| 189                    | 2     | 1   | AA     | 77UCH 02  | 195                    | 5     |     | RTNA   | 76GAU 01  |
| 189                    | 2     |     | AA     | 80IID 01  | 195                    | 10    |     | ICPES  | 81KNA 01  |
| 189                    | 3.4   | 6   | DCPES  | 83FRA 01  | 196                    |       |     | ASV    | 83HOL 01  |
| 189                    | 4     | 11  | ICPES  | 82JON 01  | 196                    |       | 14  | FAA    | 80CHA 08  |
| 189                    | 4     |     | CPXRF  | 81ROB 02  | 196                    |       |     | RTNA   | 85TIA 01  |
| 189                    | 6     |     | FAA    | 81CLE 01  | 196                    | 6     | 6   | FAA    | 76LAN 01  |
| 189                    | 7     |     | ICPES  | 78JAC 01  | 196                    | 8     |     | CPXRF  | 77WIL 02  |
| 189                    | 12    |     | CPXRF  | 80KIR 01  | 196                    | 9     |     | FAA    | 75SME 01  |
| 189                    | 20    |     | EXRF   | 84KNA 01  | 196                    | 9     |     | AA     | 81KRI 01  |
| 190                    |       | 11  | AA     | 81MOH 01  | 196                    | 14.7  |     | RTNA   | 79PLA 01  |
| 190                    | 1     |     | RTNA   | 80WOI 01  | 196                    | 28    |     | RTNA   | 82KIM 01  |
| 190                    | 2     |     | FAA    | 84HAR 02  | 197                    |       |     | NAA    | 78GAN 01  |
| 190                    | 3     |     | FAA    | 79WAR 01  | 197                    | 4     |     | ITNA   | 79SAT 01  |
| 190                    | 8     |     | VV     | 80SCH 05  | 197                    | 11    | 2   | FAA    | 84MIL 01  |
| 190                    | 10    |     | ICPES  | 79ABE 01  | 197                    | 13    | 6   | POL    | 72SIN 01  |
| 190                    | 14    |     | ITNA   | 84ALK 01  | 197                    | 16    |     | CPXRF  | 80MAE 01  |
| 190                    | 15    |     | ASV    | 81DOG 01  | 198                    |       |     | AA     | 80EVA 01  |
| 190                    | 24    |     | ITNA   | 77HAM 01  | 198                    | 7     |     | AA     | 82EVA 01  |
| 191                    |       | 6   | NAA    | 72SIN 01  | 198                    | 9     |     | ITNA   | 79CHA 02  |
| 191                    |       | 14  | FAA    | 80CHA 08  | 199                    | 6     |     | ITNA   | 80MAE 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Cu (ug/g) cont.</u> |       |     |        |           | <u>F (ng/g)</u>  |       |     |        |           |
| 199                    | 12    |     | ITNA   | 84GLA 02  | 40               | 20    |     | ISE    | 83KNA 01  |
| 200                    |       | 11  | AA     | 81MOH 01  | 120              |       |     | ISE    | 84GLA 02  |
| 200                    | 2     |     | RTNA   | 79DER 01  |                  |       |     |        |           |
| 200                    | 4     |     | ICPES  | 83SCH 04  | <u>Fe (ug/g)</u> |       |     |        |           |
| 200                    | 7     |     | FAA    | 84ROS 01  | 110              | 5     |     | AA     | 75HIN 01  |
| 201                    |       |     | ICPES  | 78DAH 01  | 132              |       | 17  | UU     | 74MAS 01  |
| 201                    | 1     | 7   | RTNA   | 84FAR 02  | 137              | 5     |     | 14NAA  | 81WIL 01  |
| 201                    | 4     | 13  | HPLC   | 85BON 01  | 149              |       | 11  | XRF    | 83PEL 01  |
| 201.7                  | 7.9   |     | RTNA   | 77BUO 01  | 150              |       | 11  | XRF    | 83PEL 01  |
| 202                    | 4     | 13  | HPLC   | 85BON 01  | 155              | 49    | 11  | AA     | 78GOR 01  |
| 204                    |       |     | ICPES  | 80HAA 01  | 186              | 37    |     | AA     | 79MAN 01  |
| 204                    | 9     |     | CPXRF  | 78VIS 01  | 187              | 80    | 12  | FAE    | 83MAR 04  |
| 204                    | 9     |     | AA     | 84CUB 01  | 205              |       |     | CPXRF  | 78UEM 01  |
| 205                    |       | 6   | AA     | 72SIN 01  | 209              | 28    | 11  | ICPES  | 82JON 01  |
| 206                    | 5     |     | RTNA   | 74RAV 01  | 220              | 16    |     | RTNA   | 77MEL 01  |
| 207                    |       | 11  | ASV    | 81DAN 01  | 226              |       | 17  | UU     | 74MAS 01  |
| 208                    | 11    |     | AA     | 76LAN 01  | 229              |       | 17  | UU     | 74MAS 01  |
| 208                    | 27    |     | RTNA   | 74SCH 03  | 230              | 37    |     | FAA    | 77FUJ 01  |
| 210                    |       |     | ICPES  | 78CAP 01  | 234              | 6     |     | FAA    | 84HAR 02  |
| 210                    | 12.5  |     | FAA    | 75PIC 01  | 236              | 5     |     | RTNA   | 75LIE 01  |
| 213                    |       | 17  | UU     | 74MAS 01  | 236              | 5     |     | RTNA   | 77LIE 01  |
| 216                    |       | 11  | ASV    | 81DAN 01  | 239              |       |     | ICPES  | 84NAD 01  |
| 216                    | 22    | 32  | CPXRF  | 77CRO 01  | 240              |       | 11  | XRF    | 83PEL 01  |
| 225                    | 21    |     | ICPES  | 82AZI 02  | 240              |       | 17  | UU     | 74MAS 01  |
| 241                    | 45    |     | CPAA   | 78MCG 01  | 240              | 7     |     | EXRF   | 80DYC 01  |
| 241                    | 54    | 32  | CPXRF  | 77CRO 01  | 240              | 12    |     | RTNA   | 77TJI 01  |
| 241                    | 65    |     | CPXRF  | 76ZEI 01  | 241              | 8     | 1   | ICPES  | 78SUD 01  |
| 270                    | 90    |     | 14NAA  | 81WIL 02  | 242              |       | 17  | UU     | 74MAS 01  |
| 277                    | 14    |     | AA     | 79MAT 02  | 243              | 14    |     | FAA    | 81CLE 02  |
| 394                    | 3     |     | AA     | 81UCH 01  | 244              | 2     |     | ICPES  | 79MCQ 02  |
| <u>Dy (ng/g)</u>       |       |     |        |           | 244              | 6     |     | ICPES  | 79MCQ 01  |
| 2.4                    | 0.8   |     | RTNA   | 76GAU 01  | 244              | 10    |     | AA     | 79MCQ 01  |
| 3.4                    | 0.1   |     | RTNA   | 86TSU 01  | 247.3            |       |     | AA     | 79LOC 01  |
| <u>Er (ng/g)</u>       |       |     |        |           | 248              | 16    |     | CPXRF  | 80MAE 01  |
| <                      | 0.5   | L   | RTNA   | 82LAU 01  | 249              |       |     | RTNA   | 75STE 02  |
| <                      | 0.5   | L   | RTNA   | 76GAU 01  | 250              | 12    |     | CPXRF  | 78VIS 01  |
| 0.5                    |       |     | RTNA   | 77LAU 02  | 250              | 22    |     | ITNA   | 77HAM 01  |
| <u>Eu (ng/g)</u>       |       |     |        |           | 252              |       |     | ITNA   | 79KUC 01  |
| 0.235                  | 0.024 |     | RTNA   | 76GAU 01  | 252              | 25    |     | ICPES  | 81BLA 01  |
| 0.3                    | 0.04  |     | RTNA   | 86TSU 01  | 253              |       |     | FAA    | 78CAP 01  |
| 0.35                   |       |     | RTNA   | 82LAU 01  | 254              |       |     | ICPES  | 78CAP 01  |
| 0.35                   |       |     | RTNA   | 77LAU 02  | 254              | 7     | 2   | FAA    | 84MIL 01  |
| 0.4                    | 0.1   |     | RTNA   | 83TJI 01  | 255              | 8     |     | ITNA   | 79SAT 01  |
| 3                      |       |     | ITNA   | 78CAP 01  | 255              | 15    |     | ITNA   | 79ZEI 01  |
| 140                    |       |     | ITNA   | 80CRE 01  | 255              | 30    |     | ITNA   | 78FUR 01  |
| 310                    |       |     | ITNA   | 73NAD 01  | 256              |       |     | OES    | 75BOL 02  |
|                        |       |     |        |           | 256              | 3     |     | AA     | 80IID 01  |
|                        |       |     |        |           | 256              | 3     | 1   | AA     | 77UCH 02  |
|                        |       |     |        |           | 256              | 32    |     | CPXRF  | 79MAN 01  |
|                        |       |     |        |           | 257              |       |     | ITNA   | 78CAP 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Fe (ug/g) cont.</u> |       |     |        |           | <u>Fe (ug/g) cont.</u> |       |     |        |           |
| 257                    |       | 11  | XRF    | 83PEL 01  | 270                    | 47    |     | ITNA   | 74DON 01  |
| 257                    |       | 14  | FAA    | 80CHA 08  | 271                    | 6     |     | ITNA   | 80MIC 01  |
| 257                    | 30    | 32  | CPXRF  | 77CRO 01  | 271                    | 27    |     | ITNA   | 81MOL 01  |
| 258                    |       | 7   | RTNA   | 81KUC 01  | 271.5                  | 11.5  | 34  | CPXRF  | 78JOL 01  |
| 258                    | 10    | 11  | ICPES  | 82JON 01  | 272                    | 3     |     | AA     | 82TIN 01  |
| 259                    | 12    | 11  | ICPES  | 81BLA 02  | 272                    | 9.5   | 11  | AA     | 74WES 01  |
| 260                    |       |     | CPXRF  | 84KAU 01  | 272                    | 15    | 7   | RTNA   | 81KUC 01  |
| 260.9                  | 12.89 |     | NAA    | 76GUZ 01  | 272                    | 27    |     | RTNA   | 76GAU 01  |
| 261                    | 8     |     | ITNA   | 86GRE 01  | 272                    | 71    |     | XRF    | 77SMI 04  |
| 261                    | 15    |     | ICPES  | 85FAS 01  | 273                    | 5     |     | ITNA   | 80MAE 01  |
| 262                    |       |     | ITNA   | 73NAD 01  | 273                    | 8.5   | 6   | CPXRF  | 77WIL 03  |
| 262                    | 7     |     | ICPES  | 78JAC 01  | 273                    | 9     |     | FAA    | 81CHA 01  |
| 262                    | 7.7   | 6   | DCPES  | 83FRA 01  | 273                    | 10    |     | AA     | 84CUB 01  |
| 262                    | 10    |     | FAA    | 81CLE 01  | 274                    | 5     |     | AA     | 80UCH 01  |
| 262                    | 13    |     | ICPES  | 79ABE 01  | 274.5                  | 28    |     | PAA    | 76KAT 04  |
| 262                    | 18    |     | CPXRF  | 81SAI 01  | 275                    | 4     | 13  | HPLC   | 85BON 01  |
| 263                    | 12    |     | ITNA   | 84ALK 01  | 275                    | 6     | 13  | HPLC   | 85BON 01  |
| 263                    | 12    |     | CPXRF  | 81ROB 02  | 275                    | 12    |     | AA     | 83RAP 01  |
| 264                    | 3     | 11  | ICPES  | 82JON 01  | 276                    |       |     | FAA    | 75SLA 01  |
| 264                    | 4     | 2   | FAA    | 84MIL 01  | 276                    | 2     | 1   | AA     | 77UCH 02  |
| 264                    | 6     | 11  | ICPES  | 82JON 01  | 277                    | 2     |     | ITNA   | 74LIN 01  |
| 264                    | 29    |     | ITNA   | 78BEH 01  | 277.9                  | 16.7  | 6   | ITNA   | 74BEC 01  |
| 264                    | 44    |     | ITNA   | 86CHI 01  | 278                    |       |     | AA     | 80EVA 01  |
| 265                    | 5     |     | GC     | 81BLA 01  | 278                    | 14    |     | CPAA   | 772IK 01  |
| 265                    | 11    |     | RTNA   | 79WAR 02  | 279                    | 20    |     | RTNA   | 77GIL 03  |
| 265                    | 16    |     | ITNA   | 74WES 01  | 280                    |       |     | AA     | 82WIL 04  |
| 265                    | 19    |     | ITNA   | 81KRI 01  | 280                    |       | 11  | SSMS   | 85VOS 01  |
| 265                    | 25    |     | NAA    | 78GAN 01  | 280                    | 30    |     | ITNA   | 772IK 01  |
| 265                    | 30    |     | ITNA   | 79CHA 02  | 281                    | 2     |     | ICPES  | 85WOL 01  |
| 266                    | 5     | 11  | ICPES  | 81BLA 02  | 282                    |       |     | ICPES  | 80HAA 01  |
| 266                    | 9     | D   | ICPES  | 80SCH 08  | 282                    | 26    |     | ICPES  | 84ZER 01  |
| 266                    | 9     |     | ICPES  | 80SCH 05  | 283                    | 60    |     | CPAA   | 78MCG 01  |
| 266                    | 10    | 11  | AA     | 74WES 01  | 283                    | 68    |     | CPXRF  | 76ZEI 01  |
| 266                    | 10    | 11  | AA     | 78GOR 01  | 285                    |       | 17  | UU     | 74MAS 01  |
| 267                    |       | 14  | FAA    | 80CHA 08  | 287                    | 17    |     | CPXRF  | 77WIL 02  |
| 267                    | 5     |     | EXRF   | 79GIA 01  | 287                    | 81    |     | IENA   | 86CHI 01  |
| 268                    | 8     |     | FAA    | 80LON 01  | 289                    | 52    | 32  | CPXRF  | 77CRO 01  |
| 268                    | 24    |     | EXRF   | 77NIE 01  | 290                    |       |     | ITNA   | 80CRE 01  |
| 268                    | 25    | 1   | ICPES  | 78SUD 01  | 293                    |       | 17  | UU     | 74MAS 01  |
| 268                    | 38    |     | VV     | 79LAK 01  | 293                    | 8     |     | RTNA   | 80SLO 01  |
| 269                    | 9     |     | CPXRF  | 85CLA 01  | 293                    | 8     |     | ITNA   | 79DAS 01  |
| 269                    | 10    |     | ICPES  | 81KNA 01  | 293                    | 21    | 6   | CPXRF  | 77WIL 03  |
| 269                    | 12    |     | ITNA   | 80LAK 01  | 300                    | 31    | 12  | FAA    | 85CAR 02  |
| 270                    |       |     | ICPES  | 78DAH 01  | 305                    | 33    |     | ICPES  | 84BLA 01  |
| 270                    |       | 11  | SSMS   | 85VOS 01  | 310                    | 28    |     | RTNA   | 74SCH 03  |
| 270                    | 4.2   | 6   | DCPES  | 83FRA 01  | 310                    | 33    | 12  | FAA    | 85CAR 02  |
| 270                    | 12    |     | ITNA   | 73COR 01  | 315                    |       |     | ITNA   | 77OSB 01  |
| 270                    | 12    |     | COLOR  | 78GOR 01  | 331                    |       | 17  | UU     | 74MAS 01  |
| 270                    | 18    |     | CPXRF  | 84BIS 01  | 334                    | 10    |     | 14NAA  | 81WIL 02  |
| 270                    | 20    | 7   | RTNA   | 80GAL 02  | 343                    | 19    |     | AA     | 82HAR 01  |
| 270                    | 20    |     | NAA    | 77GIL 01  | 345                    | 7     | 12  | FAE    | 83MAR 04  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Fe (ug/g) cont.</u> |       |     |        |           | <u>Hg (ng/g) cont.</u> |       |     |        |           |
| 350                    | 64    |     | RTNA   | 77KUS 01  | 16                     | 1.2   |     | FAA    | 72ROO 01  |
| 364                    |       | 17  | UU     | 74MAS 01  | 16                     | 1.6   |     | RTNA   | 79MAY 01  |
| 1395                   |       |     | AE+AF  | 79ULL 01  | 16                     | 2     |     | FAA    | 77GLA 03  |
| 1433                   |       | 17  | UU     | 74MAS 01  | 16                     | 2     |     | RTNA   | 77TJI 01  |
| <u>Ga (ng/g)</u>       |       |     |        |           | 16                     | 2     |     | AA     | 79FLA 02  |
|                        |       |     |        |           | 16                     | 3     |     | CVAA   | 80TON 01  |
| <                      | 240   | L   | IENA   | 78WAN 01  | 16                     | 3     | 7   | RTNA   | 81KUC 01  |
| <                      | 500   | L   | EXRF   | 79GIA 01  | 16                     | 5     |     | CVAA   | 80KOR 01  |
| <                      | 20000 | L   | 14NAA  | 81WIL 02  | 16.1                   | 0.4   |     | ITNA   | 86GRE 01  |
| 4                      |       |     | RTNA   | 74HEN 01  | 16.2                   | 0.08  |     | RTNA   | 84DRA 01  |
| 1100                   | 700   |     | CPXRF  | 77WIL 02  | 16.2                   | 3     | 14  | FAA    | 74CHU 03  |
| <u>Gd (ng/g)</u>       |       |     |        |           | 16.4                   | 0.4   |     | RTNA   | 74HEN 01  |
|                        |       |     |        |           | 16.4                   | 4.3   |     | NAA    | 76GUZ 01  |
| <                      | 1.4   | L   | RTNA   | 76GAU 01  | 16.5                   | 0.8   |     | CVAA   | 72RAI 01  |
| 1.8                    |       |     | RTNA   | 82LAU 01  | 16.8                   | 1.8   | 5   | RTNA   | 80GRE 01  |
| 2.4                    |       |     | RTNA   | 77LAU 02  | 17                     | 2     |     | RTNA   | 74ORV 01  |
| <u>Ge (ng/g)</u>       |       |     |        |           | 17                     | 2     |     | RTNA   | 79WAR 02  |
|                        |       |     |        |           | 17                     | 2     |     | CVAA   | 82SUL 01  |
| <                      | 400   | L   | EXRF   | 79GIA 01  | 17                     | 4     | 2   | CVAA   | 79KNE 01  |
| <u>H (%)</u>           |       |     |        |           | 17.3                   | 2.8   | 5   | RTNA   | 80GRE 01  |
|                        |       |     |        |           | 17.4                   | 2     |     | RTNA   | 82GRI 01  |
| 6.8                    | 0.3   |     | TCGS   | 79FAI 01  | 18                     | 2     |     | RTNA   | 79CHA 02  |
| 7                      | 0.1   | 35  | TCGS   | 79GLA 04  | 18                     | 3     |     | RTNA   | 75LIT 01  |
| 7.12                   | 0.1   |     | CB     | 80SCH 02  | 18                     | 40    | R*  | AA     | 83YAN 01  |
| <u>Hf (ng/g)</u>       |       |     |        |           | 20                     |       |     | UU     | 74FEL 01  |
|                        |       |     |        |           | 20                     |       | 17  | UU     | 74MAS 01  |
| 1                      |       |     | RTNA   | 80SLO 01  | 20                     | 2     |     | CVAA   | 77AND 01  |
| 7.3                    |       |     | ITNA   | 80CRE 01  | 20                     | 5     |     | CVAA   | 84BAR 02  |
| <u>Hg (ng/g)</u>       |       |     |        |           | 22                     | 1     |     | RTNA   | 75LIE 01  |
|                        |       |     |        |           | 22.1                   | 6.3   | 14  | FAA    | 74CHU 03  |
| 13.7                   | 1.4   | 14  | FAA    | 74CHU 01  | 22.3                   | 1.3   |     | RTNA   | 77LIE 01  |
| 14                     | 2     |     | FAA    | 79STO 01  | 30                     | 10    |     | FAA    | 78EGA 01  |
| 14                     | 2     |     | CVAA   | 78MAT 01  | 41                     |       | 17  | UU     | 74MAS 01  |
| 14.5                   | 1.7   |     | RTNA   | 72RAI 01  | 47                     | 4     |     | RTNA   | 77MEL 01  |
| 14.5                   | 3.4   |     | RTNA   | 72ROO 01  | 200                    | 21    |     | ITNA   | 75LIT 01  |
| 14.5                   | 3.4   |     | RTNA   | 72ROO 02  | <u>Ho (ng/g)</u>       |       |     |        |           |
| 14.7                   |       |     | RTNA   | 75STE 02  |                        |       |     |        |           |
| 15                     | 2     |     | MPOES  | 81TAN 01  | <                      | 0.94  | L   | RTNA   | 76GAU 01  |
| 15                     | 4     |     | RTNA   | 74SCH 03  | 0.2                    |       |     | RTNA   | 82LAU 01  |
| 15.8                   | 5.1   | 14  | FAA    | 74CHU 03  | 0.25                   |       |     | RTNA   | 77LAU 02  |
| 16                     |       | 7   | RTNA   | 81KUC 01  | 0.3                    | 0.1   |     | RTNA   | 86TSU 01  |
| 16                     |       |     | CVAA   | 79TAG 01  |                        |       |     |        |           |
| 16                     |       |     | CVAA   | 82GLA 02  |                        |       |     |        |           |
| 16                     | 0.3   |     | RTNA   | 83GRE 02  |                        |       |     |        |           |
| 16                     | 1     |     | RTNA   | 74BYR 03  |                        |       |     |        |           |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc             | Uncer  | Com | Method | Reference | Conc               | Uncer  | Com | Method | Reference |
|------------------|--------|-----|--------|-----------|--------------------|--------|-----|--------|-----------|
| <u>I (ng/g)</u>  |        |     |        |           | <u>K (%) cont.</u> |        |     |        |           |
| 180              | 12     |     | RTNA   | 77ROO 01  | 0.95               | 0.05   |     | CPXRF  | 80KIR 01  |
| 190              |        |     | ITNA   | 84GLA 11  | 0.96               |        |     | ITNA   | 79KUC 01  |
| 200              | 10     |     | RTNA   | 79WAR 02  | 0.96               |        |     | ITNA   | 73NAD 01  |
| 210              | 60     |     | IENA   | 84FAR 01  | 0.96               | 0.06   |     | AA     | 74WES 01  |
| 220              | 30     |     | ITNA   | 79CHA 02  | 0.961              |        |     | CPXRF  | 84KAU 01  |
| 221.8            | 14.8   |     | RTNA   | 80GVA 01  | 0.964              |        |     | CPXRF  | 76ZEI 01  |
| 230              | 40     |     | IENA   | 84GLA 11  | 0.964              | 0.0244 |     | ITNA   | 84ALK 01  |
| 237              |        |     | IENA   | 85GAU 04  | 0.9645             | 0.0045 |     | CPAA   | 78MCG 01  |
| 246              | 11     | 35  | RTNA   | 81ALL 01  | 0.969              | 0.022  |     | FE     | 80UCH 01  |
| 249              | 12     | 34  | RTNA   | 81ALL 01  | 0.969              | 0.09   |     | ITNA   | 79CHA 02  |
| 249              | 12     |     | RTNA   | 81STR 01  | 0.969              | 0.091  |     | PAA    | 76KAT 04  |
| 251              | 16     |     | RTNA   | 83ALL 01  | 0.9695             | 0.0785 |     | ITNA   | 74DON 01  |
| 270              | 30     |     | IENA   | 82SAT 01  | 0.97               | 0.05   | 11  | ICPES  | 82JON 01  |
| 280              |        |     | NAA    | 79HEC 01  | 0.979              | 0.024  | 12  | FAA    | 85CAR 02  |
| 280              | 10     |     | MS     | 85SCH 01  | 0.979              | 0.028  |     | WXRF   | 84ALK 01  |
| <u>In (ng/g)</u> |        |     |        |           |                    |        |     |        |           |
| <                | 1000   | L   | RTNA   | 76GAU 01  | 0.98               |        |     | UU     | 74MAS 01  |
| 0.05             |        |     | RTNA   | 74RAV 01  | 0.98               | 0.008  |     | FAA    | 84HAR 02  |
| 0.09             | 0.01   |     | RTNA   | 78KOB 01  | 0.98               | 0.026  |     | ITNA   | 86GRE 01  |
| <u>K (%)</u>     |        |     |        |           |                    |        |     |        |           |
| 0.5              | 0.07   |     | CPXRF  | 80MAE 01  | 0.98               | 0.1    |     | ITNA   | 82EHM 01  |
| 0.63             | 0.11   |     | 14NAA  | 81WIL 01  | 0.9875             |        | 17  | UU     | 74MAS 01  |
| 0.6674           | 0.0662 |     | RTNA   | 74SCH 03  | 0.99               | 0.02   |     | ITNA   | 80MIC 01  |
| 0.7              |        |     | CPXRF  | 78UEM 01  | 0.99               | 0.02   | 11  | ICPES  | 82JON 01  |
| 0.7              |        | 11  | SSMS   | 85VOS 01  | 0.99               | 0.03   |     | CPXRF  | 84BIS 01  |
| 0.725            | 0.789  | RD  | ITNA   | 79IMA 03  | 0.992              | 0.022  |     | AA     | 75HIN 01  |
| 0.725            | 0.7898 | R   | ITNA   | 79IMA 01  | 0.9984             | 0.0648 |     | NAA    | 76GUZ 01  |
| 0.742            |        |     | ITNA   | 78CAP 01  | 1.00               |        |     | ITNA   | 77OSB 01  |
| 0.7537           |        | 17  | UU     | 74MAS 01  | 1.00               | 0.01   | 2   | FAA    | 84MIL 01  |
| 0.76             |        | 11  | SSMS   | 85VOS 01  | 1.00               | 0.03   |     | TCGS   | 79FAI 01  |
| 0.821            |        | 17  | UU     | 74MAS 01  | 1.006              |        | 1   | AA     | 78SZY 01  |
| 0.84             | 0.13   | 32  | CPXRF  | 77CRO 01  | 1.01               | 0.18   |     | ITNA   | 77HAM 01  |
| 0.85             | 0.02   |     | CPXRF  | 85CLA 01  | 1.015              |        | 1   | AA     | 78SZY 01  |
| 0.87             | 0.13   |     | ITNA   | 84GLA 02  | 1.02               | 0.01   |     | RTNA   | 80WOI 01  |
| 0.875            |        |     | ITNA   | 80CRE 01  | 1.02               | 0.012  |     | ITNA   | 78FUR 01  |
| 0.904            |        | 17  | UU     | 74MAS 01  | 1.02               | 0.03   |     | AA     | 82HAR 01  |
| 0.91             |        |     | ICPES  | 84NAD 01  | 1.021              | 0.048  | 34  | CPXRF  | 78JOL 01  |
| 0.91             | 0.08   |     | RTNA   | 79WAR 02  | 1.0323             | 0.0258 |     | RTNA   | 77LIE 01  |
| 0.92             |        | 1   | IENA   | 79KUC 01  | 1.0323             | 0.0258 |     | RTNA   | 75LIE 01  |
| 0.92             | 0.01   | 2   | FAA    | 84MIL 01  | 1.04               | 0.03   |     | ITNA   | 74WES 01  |
| 0.92             | 0.028  |     | CPXRF  | 81ROB 02  | 1.05               | 0.01   |     | ICPES  | 85WOL 01  |
| 0.93             | 0.05   |     | CPXRF  | 77WIL 02  | 1.05               | 0.02   |     | ICPES  | 85WHI 02  |
| 0.93             | 0.11   |     | EXRF   | 77NIE 01  | 1.06               |        | 35  | ITNA   | 81GLA 04  |
| 0.935            |        |     | ITNA   | 82AKA 01  | 1.06               | 0.08   |     | NAA    | 78GAN 01  |
| 0.94             | 0.05   |     | ITNA   | 80MAE 01  | 1.087              | 0.124  |     | CPXRF  | 79MAN 01  |
| 0.948            |        | 17  | UU     | 74MAS 01  | 1.12               | 0.02   |     | ITNA   | 80SLO 01  |
| 0.948            |        | 17  | UU     | 74MAS 01  | 1.13               | 0.04   |     | EXRF   | 80DYC 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>La (ng/g)</u> |       |     |        |           | <u>Mg (ug/g) cont.</u> |       |     |        |           |
| 10               | 1     |     | RTNA   | 74HEN 01  | 597                    | 10    |     | AA     | 75HIN 01  |
| 12               | 9     |     | RTNA   | 74SCH 03  | 598                    | 14    |     | ITNA   | 75PIE 01  |
| 14               | 5     |     | RTNA   | 80SLO 01  | 598                    | 50    |     | ITNA   | 77ZIK 01  |
| 17               |       |     | RTNA   | 75LIE 01  | 600                    | 9     | 1   | AA     | 77UCH 02  |
| 17               |       |     | RTNA   | 82LAU 01  | 601                    | 5     |     | ICPES  | 85WOL 01  |
| 17               |       |     | RTNA   | 77LAU 02  | 601                    | 6     | 6   | AA     | 76HOW 01  |
| 17               | 2     |     | RTNA   | 83TJI 01  | 602                    | 11    |     | AA     | 80UCH 01  |
| 17.3             | 0.4   |     | RTNA   | 77LIE 01  | 604.6                  | 26.84 |     | NAA    | 76GUZ 01  |
| 20               |       |     | ITNA   | 73NAD 01  | 605                    | 32    |     | AA     | 74WES 01  |
| 24.5             | 1.2   |     | RTNA   | 76GAU 01  | 608                    | 6     |     | RTNA   | 79WAR 02  |
| 31               | 1     |     | RTNA   | 86TSU 01  | 608                    | 6     |     | ITNA   | 79WAR 01  |
| 62               | 5     |     | ITNA   | 79CHA 02  | 609                    |       |     | AE+AF  | 79ULL 01  |
| 70               |       |     | ITNA   | 78CAP 01  | 610                    | 15    |     | FAA    | 79WAR 01  |
| 72               |       |     | ITNA   | 80CRE 01  | 613                    |       |     | ICPES  | 78CAP 01  |
| <u>Li (ng/g)</u> |       |     |        |           | <u>Mn (ug/g)</u>       |       |     |        |           |
| 164              | 26    |     | AA     | 85EVA 01  | 616                    | 19    |     | ICPES  | 85WHI 02  |
| <u>Lu (ng/g)</u> |       |     |        |           | 618                    | 10    |     | RTNA   | 80WOI 01  |
| <                | 0.02  |     | RTNA   | 83TJI 01  | 620                    | 20    |     | ITNA   | 79CHA 02  |
| <                | 0.1   | L   | RTNA   | 76GAU 01  | 629                    | 6.7   | 6   | DCPES  | 83FRA 01  |
| 0.039            |       |     | RTNA   | 77LAU 02  | 629                    | 12.3  | 6   | DCPES  | 83FRA 01  |
| 0.039            |       |     | RTNA   | 82LAU 01  | 636                    |       |     | ICPES  | 78DAH 01  |
| <u>Mg (ug/g)</u> |       |     |        |           | 638                    | 34    |     | WXRF   | 84ALK 01  |
| 290              | 40    |     | 14NAA  | 81WIL 01  | 650                    | 60    |     | ITNA   | 86GRE 01  |
| 332              | 541   | R   | ITNA   | 79IMA 01  | 657                    | 9     | 11  | ICPES  | 82JON 01  |
| 332              | 541   | RD  | ITNA   | 79IMA 03  | 658                    | 48    |     | ICPES  | 84BLA 01  |
| 450              |       | 11  | SSMS   | 85VOS 01  | 659                    | 82    |     | ITNA   | 74WES 01  |
| 516              |       | 17  | UU     | 74MAS 01  | 660                    | 20    | 11  | ICPES  | 82JON 01  |
| 517              |       | 17  | UU     | 74MAS 01  | 668                    | 42    |     | AA     | 79LAK 01  |
| 555              | 12    | 2   | FAA    | 84MIL 01  | 674                    |       | 17  | UU     | 74MAS 01  |
| 555              | 21    | 1   | ICPES  | 78SUD 01  | 684                    | 110   |     | ITNA   | 78FUR 01  |
| 558              | 11    |     | ITNA   | 84ALK 01  | 700                    | 20    |     | 14NAA  | 81WIL 02  |
| 566              |       |     | FAA    | 78CAP 01  | 700                    | 130   |     | ITNA   | 77HAM 01  |
| 566              | 10    |     | AA     | 79MCQ 01  | 712                    | 98    | 1   | ICPES  | 78SUD 01  |
| 567              |       |     | AA     | 79LOC 01  | 720                    |       |     | ITNA   | 84GLA 11  |
| 573              | 4     |     | ICPES  | 79MCQ 02  | 949                    |       |     | ITNA   | 78CAP 01  |
| 573              | 17    |     | ICPES  | 79MCQ 01  | 1040                   |       |     | ITNA   | 73NAD 01  |
| 580              | 20    |     | CPXRF  | 80KIR 01  | <u>Mn (ug/g)</u>       |       |     |        |           |
| 588              |       |     | ICPES  | 84NAD 01  | 5.3                    | 0.72  | 6   | ITNA   | 74HOF 01  |
| 590              | 40    |     | ICPES  | 79ABE 01  | 7.7                    |       |     | FAA    | 83ATS 01  |
| 593              | 10    |     | AA     | 80IID 01  | 8                      | 1     |     | CPXRF  | 80MAE 01  |
| 593              | 10    | 1   | AA     | 77UCH 02  | 8.4                    | 2.1   |     | CPXRF  | 80KIR 01  |
| 593              | 49    |     | AA     | 82HAR 01  | 8.5                    | 2.6   |     | ICPES  | 82AZI 02  |
| 594              | 13    | 2   | FAA    | 84MIL 01  | 8.73                   |       |     | FAA    | 77SHE 02  |
| 595              | 6     | 6   | AA     | 76HOW 01  | 9.00                   | 0.37  |     | FAA    | 74GRO 01  |
| 596.5            | 13.5  |     | PAA    | 76KAT 04  | 9.0                    | 0.7   |     | VV     | 80SCH 05  |
|                  |       |     |        |           | 9.0                    | 0.7   | D   | ICPES  | 80SCH 08  |
|                  |       |     |        |           | 9.0                    | 2.2   | 6   | CPXRF  | 77WIL 03  |
|                  |       |     |        |           | 9.12                   |       | 17  | UU     | 74MAS 01  |
|                  |       |     |        |           | 9.14                   |       |     | ITNA   | 73NAD 01  |
|                  |       |     |        |           | 9.2                    |       | 11  | SSMS   | 85VOS 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Mn (ug/g) cont.</u> |       |     |        |           | <u>Mn (ug/g) cont.</u> |       |     |        |           |
| 9.2                    | 0.7   |     | AA     | 79FLA 02  | 10.1                   | 1.1   |     | ITNA   | 79SAT 01  |
| 9.2                    | 0.9   | 11  | ICPES  | 81BLA 02  | 10.1                   | 1.2   |     | CPXRF  | 81ROB 02  |
| 9.2                    | 1.1   | 12  | FAA    | 85CAR 02  | 10.1                   | 3.6   |     | EXRF   | 77NIE 01  |
| 9.2                    | 1.8   | 6   | CPXRF  | 77WIL 03  | 10.15                  | 2.15  |     | PAA    | 76KAT 04  |
| 9.26                   | 0.85  |     | RTNA   | 79PLA 01  | 10.17                  | 0.69  |     | NAA    | 76GUZ 01  |
| 9.3                    |       |     | ITNA   | 82AKA 01  | 10.2                   |       | 17  | UU     | 74MAS 01  |
| 9.3                    | 0.5   |     | CPXRF  | 84BIS 01  | 10.2                   |       | 17  | UU     | 74MAS 01  |
| 9.4                    | 0.1   | 7   | RTNA   | 84FAR 02  | 10.2                   |       |     | ASV    | 80CHR 01  |
| 9.4                    | 0.3   |     | RTNA   | 83DAN 01  | 10.2                   | 0.1   |     | AA     | 80IID 01  |
| 9.4                    | 1.1   |     | EXRF   | 79GIA 01  | 10.2                   | 0.2   |     | AA     | 75HIN 01  |
| 9.42                   |       | 17  | UU     | 74MAS 01  | 10.2                   | 0.4   |     | ICPES  | 82EVA 01  |
| 9.44                   | 1.16  |     | FAA    | 84HAR 02  | 10.2                   | 0.45  | 11  | RTNA   | 74WES 01  |
| 9.5                    |       | 17  | UU     | 74MAS 01  | 10.2                   | 1     | 1   | AA     | 77UCH 02  |
| 9.5                    | 0.5   |     | ITNA   | 82KIM 01  | 10.23                  | 0.43  |     | RTNA   | 74RAV 01  |
| 9.5                    | 0.7   | 11  | ICPES  | 81BLA 02  | 10.3                   | 0.2   |     | ITNA   | 82EHM 01  |
| 9.5                    | 1.4   |     | CPXRF  | 77WIL 02  | 10.3                   | 0.2   |     | ICPES  | 85WOL 01  |
| 9.6                    | 0.4   |     | RTNA   | 74HEN 01  | 10.3                   | 0.2   |     | AA     | 85KOJ 01  |
| 9.6                    | 0.5   |     | RTNA   | 77KUS 01  | 10.3                   | 0.3   |     | FAA    | 82CLE 01  |
| 9.6                    | 0.6   | 11  | FAA    | 74WES 01  | 10.3                   | 0.3   |     | FAA    | 81CLE 02  |
| 9.7                    |       |     | ICPES  | 78CAP 01  | 10.3                   | 0.36  | 11  | FAA    | 74WES 01  |
| 9.7                    |       | 11  | SSMS   | 85VOS 01  | 10.3                   | 0.77  |     | ITNA   | 77HAM 01  |
| 9.7                    | 0.3   |     | CPXRF  | 85CLA 01  | 10.3                   | 0.8   |     | RTNA   | 76GAU 01  |
| 9.7                    | 0.3   | 1   | ICPES  | 78SUD 01  | 10.3                   | 1     |     | FAA    | 80LON 01  |
| 9.7                    | 0.8   | 11  | ICPES  | 82JON 01  | 10.4                   |       |     | FAA    | 78CAP 01  |
| 9.71                   | 1.36  |     | ICPES  | 82AZI 01  | 10.4                   |       |     | AA     | 82CLE 01  |
| 9.77                   | 0.79  |     | ITNA   | 74DON 01  | 10.4                   | 0.2   |     | FAA    | 82CLE 01  |
| 9.8                    | 1.1   |     | FAA    | 82GRO 01  | 10.4                   | 0.23  |     | FAA    | 75PIC 01  |
| 9.9                    |       |     | ICPES  | 78DAH 01  | 10.4                   | 0.3   | 1   | AA     | 77UCH 02  |
| 9.9                    |       | 17  | UU     | 74MAS 01  | 10.4                   | 0.4   |     | RTNA   | 77BUO 01  |
| 9.9                    | 0.3   |     | COLOR  | 84HIR 02  | 10.4                   | 0.4   | 11  | ICPES  | 82JON 01  |
| 9.9                    | 0.47  |     | ITNA   | 74WES 01  | 10.4                   | 0.6   | 11  | FAA    | 75SME 01  |
| 9.9                    | 0.9   |     | ICPES  | 85WHI 02  | 10.4                   | 1.1   |     | RTNA   | 74SCH 03  |
| 9.95                   | 0.22  |     | ITNA   | 86GRE 01  | 10.5                   |       | 11  | XRF    | 83PEL 01  |
| 10                     |       | 35  | ITNA   | 81GLA 04  | 10.5                   | 0.1   | 7   | RTNA   | 84FAR 02  |
| 10                     |       |     | FAA    | 75SLA 01  | 10.5                   | 0.1   | 7   | RTNA   | 84FAR 02  |
| 10                     |       | 11  | AA     | 81MOH 01  | 10.5                   | 0.2   |     | RTNA   | 80WOI 01  |
| 10.0                   | 0.5   |     | NAA    | 78GAN 01  | 10.5                   | 0.3   | 11  | ICPES  | 82JON 01  |
| 10.0                   | 0.6   | 6   | ITNA   | 74HOF 01  | 10.5                   | 0.6   |     | AA     | 83RAP 01  |
| 10.0                   | 0.7   |     | ITNA   | 79WAR 01  | 10.5                   | 0.6   |     | ITNA   | 84GLA 02  |
| 10.0                   | 0.7   |     | RTNA   | 79WAR 02  | 10.5                   | 1.1   |     | ITNA   | 79CHA 02  |
| 10                     | 1     |     | ICPES  | 79MCQ 01  | 10.5                   | 16    | 6   | FAA    | 76LAN 01  |
| 10                     | 1     |     | ICPES  | 79MCQ 02  | 10.6                   | 0.11  | 6   | DCPES  | 83FRA 01  |
| 10.0                   | 1.3   |     | ICPES  | 79ABE 01  | 10.6                   | 0.19  | D   | AA     | 84HUD 03  |
| 10                     | 2     |     | EXRF   | 80DYC 01  | 10.6                   | 0.19  |     | AA     | 84HUD 01  |
| 10                     | 5     |     | AA     | 76LAN 01  | 10.6                   | 0.2   |     | ICPES  | 83SCH 04  |
| 10.1                   |       |     | CPXRF  | 84KAU 01  | 10.6                   | 0.7   |     | FAA    | 81CLE 01  |
| 10.1                   |       |     | ITNA   | 84GLA 11  | 10.6                   | 1.1   |     | ITNA   | 78FUR 01  |
| 10.1                   | 0.1   |     | AA     | 82CLE 01  | 10.7                   | 0.3   |     | ITNA   | 80MAE 01  |
| 10.1                   | 0.2   |     | ITNA   | 80SLO 01  | 10.8                   | 0.15  | 6   | DCPES  | 83FRA 01  |
| 10.1                   | 0.5   | 11  | RTNA   | 74WES 01  | 10.8                   | 0.2   | 2   | FAA    | 84MIL 01  |
| 10.1                   | 0.6   | 2   | FAA    | 84MIL 01  | 10.8                   | 0.3   |     | RTNA   | 82KIM 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Mn (ug/g) cont.</u> |       |     |        |           | <u>Mo (ug/g) cont.</u> |       |     |        |           |
|                        |       |     |        |           | 2.97                   |       | 17  | UU     | 74MAS 01  |
| 10.8                   | 0.8   |     | FAA    | 79WAR 01  | 3                      |       |     | ITNA   | 73NAD 01  |
| 10.8                   | 20    | 6   | FAA    | 76LAN 01  | 3.0                    | 0.2   |     | RTNA   | 83DAN 01  |
| 10.9                   | 1.2   |     | CPXRF  | 79MAN 01  | 3.0                    | 0.3   |     | RTNA   | 77GIL 03  |
| 10.9                   | 1.5   | 34  | CPXRF  | 78JOL 01  | 3.0                    | 0.3   |     | NAA    | 77GIL 01  |
| 10.9                   | 2     |     | XRF    | 77SMI 04  | 3.0                    | 0.3   | 7   | RTNA   | 80GAL 02  |
| 11                     |       |     | AA     | 80EVA 01  | 3.04                   | 0.18  |     | IENA   | 75MAZ 01  |
| 11                     |       | 17  | UU     | 74MAS 01  | 3.06                   | 0.7   | 34  | CPXRF  | 78JOL 01  |
| 11                     |       | 11  | AA     | 81MOH 01  | 3.1                    |       |     | FAA    | 79BEN 01  |
| 11                     |       |     | ICPES  | 84NAD 01  | 3.1                    |       | 1   | IENA   | 79KUC 01  |
| 11.0                   | 0.4   |     | FAA    | 81CHA 01  | 3.1                    | 0.03  |     | RTNA   | 80KUL 01  |
| 11.0                   | 0.4   |     | AA     | 82EVA 01  | 3.1                    | 0.5   | 11  | ICPES  | 82JON 01  |
| 11.0                   | 0.7   |     | ICPES  | 84ZER 01  | 3.12                   | 0.26  |     | RTNA   | 78NAD 01  |
| 11.1                   | 1.6   |     | AA     | 82HAR 01  | 3.19                   | 0.14  |     | RTNA   | 77LIE 01  |
| 11.1                   | 2.1   |     | ICPES  | 85FAS 01  | 3.19                   | 0.14  |     | RTNA   | 75LIE 01  |
| 11.2                   | 0.5   |     | RTNA   | 77LIE 01  | 3.2                    |       |     | ITNA   | 79KUC 01  |
| 11.2                   | 0.5   |     | RTNA   | 75LIE 01  | 3.2                    | 0.1   |     | RTNA   | 77DIK 01  |
| 11.2                   | 0.7   |     | FAA    | 84ROS 01  | 3.2                    | 0.11  |     | ITNA   | 86GRE 01  |
| 11.2                   | 1.4   | 1   | ICPES  | 78SUD 01  | 3.23                   | 0.09  |     | SSMS   | 77PAU 01  |
| 11.4                   | 0.8   | 11  | FAA    | 75SME 01  | 3.3                    | 0.2   |     | RTNA   | 79WAR 02  |
| 11.4                   | 3.7   | 12  | FAA    | 85CAR 02  | 3.3                    | 0.3   | 11  | RTNA   | 74WES 01  |
| 11.5                   |       | 17  | UU     | 74MAS 01  | 3.31                   | 0.09  |     | COLOR  | 85EVA 02  |
| 11.5                   |       |     | ITNA   | 78CAP 01  | 3.33                   |       |     | RTNA   | 75STE 02  |
| 11.5                   | 13.7  | RD  | ITNA   | 79IMA 03  | 3.39                   | 0.24  |     | POL    | 84NAG 01  |
| 11.5                   | 13.7  | R   | ITNA   | 79IMA 01  | 3.4                    |       | 1   | IENA   | 79KUC 01  |
| 11.7                   | 0.7   |     | FAA    | 79WES 01  | 3.4                    | 0.1   | 11  | ICPES  | 82JON 01  |
| 12                     | 2.6   |     | ITNA   | 84ALK 01  | 3.4                    | 0.15  |     | FAA    | 74WES 01  |
| 12.5                   | 2     |     | DCPES  | 79REE 01  | 3.4                    | 0.2   |     | RTNA   | 80SLO 01  |
| 12.5                   | 2     | D   | DCPES  | 81REE 01  | 3.4                    | 0.2   | 7   | RTNA   | 81KUC 01  |
| 13                     |       |     | AE+AF  | 79ULL 01  | 3.4                    | 0.36  |     | RTNA   | 82BYR 01  |
| 13                     | 3     |     | ITNA   | 77ZIK 01  | 3.4                    | 0.7   | 5   | ITNA   | 80TOU 01  |
| 13                     | 6     |     | TCGS   | 79FAI 01  | 3.42                   | 0.11  |     | RTNA   | 80VER 01  |
| 14                     | 1     |     | AA     | 79MCQ 01  | 3.42                   | 0.11  | 11  | RTNA   | 81COR 01  |
| 14.2                   | 1.8   |     | FAA    | 77FUJ 01  | 3.42                   | 0.2   |     | COLOR  | 83MAT 02  |
| 19                     |       |     | XRF    | 80SUZ 02  | 3.5                    |       |     | RTNA   | 84BYR 01  |
| 19                     | 9     |     | CPXRF  | 78VIS 01  | 3.5                    | 0.2   | 11  | RTNA   | 74WES 01  |
|                        |       |     |        |           | 3.5                    | 0.6   |     | CPXRF  | 77RIN 01  |
|                        |       |     |        |           | 3.5                    | 1.5   |     | CPXRF  | 77WIL 02  |
|                        |       |     |        |           | 3.6                    |       |     | RTNA   | 85TIA 01  |
| 1.81                   | 0.07  |     | FAA    | 84GOH 01  | 3.6                    | 0.14  | 11  | RTNA   | 81COR 01  |
| 2                      |       |     | ICPES  | 79MCQ 02  | 3.6                    | 0.7   |     | RTNA   | 74SCH 03  |
| 2                      | 1     |     | CPAA   | 77ZIK 01  | 3.6                    | 0.9   |     | CPXRF  | 80MAE 01  |
| 2.2                    | 0.9   |     | CPXRF  | 80KIR 01  | 3.7                    | 0.4   |     | 14NAA  | 81WIL 02  |
| 2.3                    |       | 11  | SSMS   | 85VOS 01  | 3.71                   | 0.25  |     | RTNA   | 77TJI 01  |
| 2.5                    |       | 17  | UU     | 74MAS 01  | 3.78                   | 0.356 |     | NAA    | 76GUZ 01  |
| 2.5                    | 0.1   |     | ITNA   | 78FUR 01  | 3.8                    |       |     | ICPES  | 80HAA 01  |
| 2.6                    | 0.4   |     | 14NAA  | 81WIL 01  | 3.8                    |       | 7   | RTNA   | 81KUC 01  |
| 2.8                    |       | 17  | UU     | 74MAS 01  | 3.9                    | 0.42  |     | RTNA   | 84MOK 02  |
| 2.8                    |       |     | ICPES  | 84MIA 01  | 4.1                    | 0.4   |     | CPXRF  | 78VIS 01  |
| 2.89                   | 0.45  |     | IENA   | 86CHI 01  | 4.3                    | 1.2   |     | ITNA   | 79ZEI 01  |
| 2.91                   | 0.14  |     | ITNA   | 80MIC 01  | 4.9                    |       | 17  | UU     | 74MAS 01  |
| 2.95                   | 0.27  |     | RTNA   | 76GAU 01  | 5.8                    | 0.3   |     | AA     | 79FLA 02  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc         | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>N (%)</u> |       |     |        |           | <u>Na (ug/g) cont.</u> |       |     |        |           |
| 10.35        | 0.3   |     | TCGS   | 79FAI 01  | 2438                   |       |     | ITNA   | 78CAP 01  |
| 10.4         | 0.8   | 35  | TCGS   | 79GLA 04  | 2440                   | 160   |     | RTNA   | 79WAR 02  |
| 10.42        | 0.11  |     | CB     | 80SCH 02  | 2454                   | 135   |     | ITNA   | 84ALK 01  |
| 10.59        | 0.04  |     | GRAV   | 74CAR 01  | 2455                   |       | 1   | AA     | 78SZY 01  |
| 10.59        | 0.04  | D   | GRAV   | 74CAR 05  | 2462                   | 502   | 12  | FAA    | 85CAR 02  |
| 10.81        | 0.24  | D   | NT     | 74CAR 05  | 2490                   | 260   | 2   | FAA    | 84MIL 01  |
| 10.82        | 0.24  |     | NT     | 74CAR 01  | 2500                   |       |     | ITNA   | 80MIC 01  |
|              |       |     |        |           | 2530                   | 120   |     | NAA    | 78GAN 01  |
|              |       |     |        |           | 2540                   |       | 1   | AA     | 78SZY 01  |
|              |       |     |        |           | 2550                   |       | 35  | ITNA   | 81GLA 04  |
| 1019         |       | 17  | UU     | 74MAS 01  | 2550                   | 190   |     | ITNA   | 78BEH 01  |
| 1152         | 119   | 6   | ITNA   | 74HOF 01  | 2570                   |       | 1   | IENA   | 79KUC 01  |
| 1600         | 100   |     | 14NAA  | 81WIL 01  | 2570                   |       | 17  | UU     | 74MAS 01  |
| 1940         | 30    |     | ITNA   | 80SLO 01  | 2570                   | 870   | 2   | FAA    | 84MIL 01  |
| 1980         | 60    |     | ITNA   | 78FUR 01  | 2609                   | 142   |     | NAA    | 76GUZ 01  |
| 2000         | 150   |     | 14NAA  | 81WIL 02  | 2632                   | 29    |     | RTNA   | 75LIE 01  |
| 2000         | 500   |     | CPXRF  | 80KIR 01  | 2632                   | 29    |     | RTNA   | 77LIE 01  |
| 2040         |       |     | ITNA   | 80CRE 01  | 2720                   | 190   |     | ICPES  | 85WHI 02  |
| 2176         | 77    | 6   | ITNA   | 74HOF 01  | 2730                   |       |     | ITNA   | 84GLA 11  |
| 2220         |       | 17  | UU     | 74MAS 01  | 2768                   | 156   |     | RTNA   | 74SCH 03  |
| 2227         | 200   |     | ITNA   | 7721K 01  | 3010                   | 230   |     | ICPES  | 84BLA 01  |
| 2230         | 210   |     | ITNA   | 77HAM 01  | 3100                   |       |     | ITNA   | 77OSB 01  |
| 2250         |       | 17  | UU     | 74MAS 01  | 3100                   | 600   |     | TCGS   | 79FAI 01  |
| 2250         |       |     | ITNA   | 84GLA 02  |                        |       |     |        |           |
| 2260         | 370   |     | ITNA   | 77JUR 02  | <u>Nd (ng/g)</u>       |       |     |        |           |
| 2280         |       | 1   | IENA   | 79KUC 01  | 9                      |       |     | RTNA   | 82LAU 01  |
| 2280         | 300   |     | ITNA   | 82SCH 05  | 14.5                   |       |     | RTNA   | 77LAU 02  |
| 2300         |       |     | ICPES  | 84NAD 01  | 18                     | 4     |     | RTNA   | 83TJI 01  |
| 2300         | 2850  | RD  | ITNA   | 79IMA 03  | 170                    | 40    |     | RTNA   | 76GAU 01  |
| 2300         | 2850  | R   | ITNA   | 79IMA 01  |                        |       |     |        |           |
| 2310         |       |     | ITNA   | 79KUC 01  | <u>Ni (ng/g)</u>       |       |     |        |           |
| 2320         | 40    |     | AA     | 75HIN 01  | <                      | 60    | L   | ICPES  | 82JON 01  |
| 2320         | 300   |     | ICPES  | 79ABE 01  | <                      | 60    |     | AA     | 82EVA 01  |
| 2330         | 60    |     | ITNA   | 74WES 01  | <                      | 60    | L   | ICPES  | 82JON 01  |
| 2340         |       | 17  | UU     | 74MAS 01  | <                      | 60    |     | ITNA   | 80MIC 01  |
| 2340         | 250   |     | AA     | 82HAR 01  | <                      | 120   |     | ITNA   | 75PIE 01  |
| 2346         | 300   | 12  | FAA    | 85CAR 02  | <                      | 500   |     | ITNA   | 79ABE 01  |
| 2355         |       |     | ITNA   | 82AKA 01  | <                      | 500   |     | ICPES  | 76GUZ 01  |
| 2360         | 30    |     | ITNA   | 86GRE 01  | <                      | 500   |     | ICPES  | 77NIE 01  |
| 2370         |       | 17  | UU     | 74MAS 01  | <                      | 590   |     | CPXRF  | 84KAU 01  |
| 2370         | 40    |     | PAA    | 76KAT 04  | <                      | 700   | L   | RTNA   | 76GAU 01  |
| 2390         | 20    |     | ICPES  | 85WOL 01  | <                      | 720   | L   | RTNA   | 81KUC 01  |
| 2400         |       | 35  | ITNA   | 81GLA 03  | <                      | 800   | L   | EXRF   | 79GIA 01  |
| 2400         |       |     | ITNA   | 73NAD 01  | <                      | 1000  |     | RTNA   | 77MEL 01  |
| 2400         | 200   |     | AA     | 74WES 01  | <                      | 9000  | L   | 14NAA  | 81WIL 01  |
| 2400         | 350   |     | FAE    | 83MAR 04  | 50                     |       |     | AA     | 78EVA 01  |
| 2410         | 10    |     | RTNA   | 74HEN 01  | 50                     | 50    |     | ICPES  | 82EVA 01  |
| 2420         | 50    |     | FE     | 80UCH 01  | 62                     | 18    |     | IENA   | 75MAZ 01  |
| 2425         |       | 17  | UU     | 74MAS 01  | 70                     | 30    |     | AA     | 79FLA 02  |
| 2426         | 130   |     | ITNA   | 74DON 01  |                        |       |     |        |           |
| 2430         | 150   |     | ITNA   | 79CHA 02  |                        |       |     |        |           |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ni (ng/g) cont.</u> |       |     |        |           | <u>Pb (ng/g)</u> |       |     |        |           |
| 155                    | 19    |     | FAA    | 80DOR 01  | 200              |       | 11  | SSMS   | 85VOS 01  |
| 180                    | 20    |     | PAA    | 79CHA 02  | 240              | 80    |     | FAA    | 77FUJ 01  |
| 195                    |       |     | GC     | 85MEY 02  | 250              |       |     | AA     | 78EVA 01  |
| 200                    | 10    |     | ASV    | 85ADE 01  | 250              | 40    |     | AA     | 82EVA 01  |
| 200                    | 30    |     | RTNA   | 79WAR 02  | 262              |       | 17  | UU     | 74MAS 01  |
| 210                    |       |     | ITNA   | 73NAD 01  | 270              | 20    | 11  | ASV    | 84ADE 03  |
| 227                    |       |     | VOLT   | 81PIH 01  | 280              | 40    |     | AA     | 80AGE 01  |
| 270                    | 120   |     | RTNA   | 77TJI 01  | 290              | 20    | 11  | ASV    | 84ADE 03  |
| 470                    |       | 7   | RTNA   | 81KUC 01  | 300              |       |     | FAA    | 79YAS 01  |
| 520                    | 150   |     | IENA   | 86CHI 01  | 300              | 20    | 11  | ASV    | 84ADE 03  |
| 600                    | 400   |     | CPXRF  | 78VIS 01  | 300              | 40    |     | FAA    | 78GRO 01  |
| 700                    | 500   |     | CPXRF  | 77WIL 02  | 300              | 100   |     | CPXRF  | 78VIS 01  |
| 1000                   | 500   |     | RTNA   | 80SLO 01  | 300              | 300   | 11  | ICPES  | 82JON 01  |
| 1000                   | 690   |     | AA     | 79MON 01  | 310              | 20    |     | VOLT   | 84OST 01  |
| 1200                   | 100   |     | EXRF   | 80DYC 01  | 320              |       | 14  | FAA    | 80CHA 08  |
| 1300                   | 200   |     | CPXRF  | 79REN 02  | 320              | 13    |     | FAA    | 75PIC 01  |
|                        |       |     |        |           | 320              | 30    | 11  | ASV    | 84ADE 03  |
|                        |       |     |        |           | 320              | 60    |     | FAA    | 79WAR 01  |
|                        |       |     |        |           | 328              | 16    | 11  | IDMS   | 74CHO 02  |
|                        |       |     |        |           | 330              |       |     | AA     | 77FRI 01  |
|                        |       |     |        |           | 330              | 9     |     | FAA    | 83STE 05  |
|                        |       |     |        |           | 330              | 10    |     | FAA    | 80POL 01  |
|                        |       |     |        |           | 330              | 10    |     | FAA    | 79DAB 02  |
|                        |       |     |        |           | 330              | 20    |     | AA     | 83RAP 01  |
|                        |       |     |        |           | 330              | 700   |     | AA     | 76LAN 01  |
|                        |       |     |        |           | 333              | 67    | 11  | IDMS   | 74CHO 02  |
|                        |       |     |        |           | 340              |       | 11  | FAA    | 81DAN 01  |
|                        |       |     |        |           | 340              | 20    |     | AA     | 79FLA 02  |
|                        |       |     |        |           | 340              | 20    |     | AA     | 85ADE 02  |
|                        |       |     |        |           | 340              | 20    | 11  | ASV    | 84ADE 03  |
|                        |       |     |        |           | 340              | 40    |     | FAA    | 76HAD 01  |
|                        |       |     |        |           | 343              | 23    |     | FAA    | 76KOI 01  |
|                        |       |     |        |           | 343              | 23    |     | AA     | 76ZAN 02  |
|                        |       |     |        |           | 350              |       |     | AA     | 84KAN 01  |
|                        |       |     |        |           | 350              | 15    |     | FAA    | 81CHA 01  |
|                        |       |     |        |           | 350              | 20    |     | FAA    | 82ATS 02  |
|                        |       |     |        |           | 350              | 22    | 6   | FAA    | 76LAN 01  |
|                        |       |     |        |           | 350              | 40    |     | AA     | 79WAR 01  |
|                        |       |     |        |           | 350              | 50    |     | FAA    | 75BEH 01  |
|                        |       |     |        |           | 350              | 50    | D   | FAA    | 80SCH 08  |
|                        |       |     |        |           | 350              | 50    |     | FAA    | 81KNA 01  |
|                        |       |     |        |           | 350              | 50    |     | AA     | 80SCH 05  |
|                        |       |     |        |           | 360              |       | 11  | FAA    | 81DAN 01  |
|                        |       |     |        |           | 360              | 12    | 6   | FAA    | 76LAN 01  |
|                        |       |     |        |           | 360              | 25    | 6   | POL    | 72SIN 01  |
|                        |       |     |        |           | 360              | 30    |     | FAA    | 79STO 01  |
|                        |       |     |        |           | 360              | 30    |     | SSMS   | 77PAU 01  |
|                        |       |     |        |           | 370              |       |     | AA     | 82WIL 04  |
|                        |       |     |        |           | 370              |       |     | ASV    | 82GAJ 01  |
|                        |       |     |        |           | 380              |       |     | FAA    | 83ATS 01  |
|                        |       |     |        |           | 380              |       |     | ICPES  | 80HAA 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com  | Method | Reference | Conc                   | Uncer | Com  | Method | Reference |          |
|------------------------|-------|------|--------|-----------|------------------------|-------|------|--------|-----------|----------|
| <u>Pb (ng/g) cont.</u> |       |      |        |           | <u>Rb (ug/g) cont.</u> |       |      |        |           |          |
| 380                    |       |      | FAA    | 82HOE 01  | 16.7                   | 3.2   |      | CPXRF  | 81ROB 02  |          |
| 380                    |       | 14   | FAA    | 80CHA 08  | 16.8                   |       | 1    | IENA   | 79KUC 01  |          |
| 380                    |       |      | FAA    | 82VAN 01  | 16.8                   | 1.9   | 6    | CPXRF  | 77WIL 03  |          |
| 380                    |       |      | ASV    | 74COP 01  | 16.9                   |       |      | ITNA   | 79KUC 01  |          |
| 380                    | 76    |      | ASV    | 79STO 01  | 17                     | 0.7   |      | ITNA   | 80MIC 01  |          |
| 390                    |       | 6    | POL    | 72SIN 01  | 17                     | 1     |      | EXRF   | 80DYC 01  |          |
| 390                    |       | 11   | ASV    | 81DAN 01  | 17                     | 3     |      | ITNA   | 77ZIK 01  |          |
| 390                    |       | 11   | ASV    | 81DAN 01  | 17.4                   | 1.8   |      | NAA    | 78GAN 01  |          |
| 390                    | 40    |      | FAA    | 84ROS 01  | 17.72                  | 1.8   |      | ITNA   | 81MOL 01  |          |
| 400                    | 30    | 6    | DCPES  | 83FRA 01  | 17.8                   |       |      | ITNA   | 78CAP 01  |          |
| 400                    | 50    |      | PAA    | 79CHA 02  | 17.97                  | 0.42  |      | ITNA   | 86CHI 01  |          |
| 400                    | 100   |      | PAA    | 74LUT 01  | 17.97                  | 0.6   |      | RTNA   | 75LIE 01  |          |
| 400                    | 300   | 11   | ICPES  | 82JON 01  | 17.97                  | 0.6   |      | RTNA   | 77LIE 01  |          |
| 420                    | 140   | 34   | CPXRF  | 78JOL 01  | 18                     |       |      | ITNA   | 77OSB 01  |          |
| 430                    | 130   |      | ICPES  | 82EVA 01  | 18                     | 0.3   |      | RTNA   | 79WAR 02  |          |
| 450                    | 30    |      | FAA    | 80LEG 01  | 18                     | 0.8   |      | ITNA   | 79SAT 01  |          |
| 460                    | 130   |      | FAA    | 74GRO 01  | 18                     | 1     |      | CPXRF  | 77WIL 02  |          |
| 480                    | 50    | 6    | DCPES  | 83FRA 01  | 18.1                   | 0.6   |      | 14NAA  | 81WIL 01  |          |
| 490                    |       | 6    | FAA    | 82KOI 01  | 18.4                   | 0.4   |      | EXRF   | 79GIA 01  |          |
| 490                    |       | 6    | FAA    | 81HIN 01  | 18.4                   | 0.7   |      | ITNA   | 86GRE 01  |          |
| 500                    |       |      | OES    | 75BOL 02  | 18.4                   | 2     |      | ITNA   | 81KRI 01  |          |
| 500                    |       | 6    | FAA    | 82KOI 01  | 18.5                   | 0.4   |      | ITNA   | 74LIN 01  |          |
| 500                    |       | 6    | FAA    | 81HIN 01  | 18.62                  | 0.95  |      | NAA    | 76GUZ 01  |          |
| 520                    |       | 17   | UU     | 74MAS 01  | 18.64                  | 0.58  |      | IENA   | 86CHI 01  |          |
| 530                    |       |      | ICPES  | 85NAR 02  | 18.7                   |       | 17   | UU     | 74MAS 01  |          |
| 3900                   | 1000  |      | CPXRF  | 77WIL 02  | 18.7                   | 0.2   |      | ITNA   | 80LAK 01  |          |
| 5000                   |       |      | 14NAA  | 81WIL 01  | 18.7                   | 0.5   |      | ITNA   | 78FUR 01  |          |
| 43000                  | 4000  |      | FAA    | 79WES 01  | 18.7                   | 0.9   | 5    | ITNA   | 80TOU 01  |          |
|                        |       |      |        |           | 18.7                   | 1     |      | ITNA   | 73COR 01  |          |
|                        |       |      |        |           | 18.7                   | 1.5   |      | ITNA   | 79CHA 02  |          |
|                        |       |      |        |           | 18.7                   | 3.6   |      | EXRF   | 77NIE 01  |          |
|                        | <     | 3    | L      | RTNA      | 82LAU 01               | 18.8  | 0.85 |        | ITNA      | 84ALK 01 |
| 4                      |       |      |        | RTNA      | 77LAU 02               | 18.8  | 1.3  |        | RTNA      | 76GAU 01 |
| 4                      | 2     |      |        | RTNA      | 86TSU 01               | 18.8  | 1.4  |        | ITNA      | 79LAK 01 |
| 4.6                    | 0.3   |      |        | RTNA      | 76GAU 01               | 18.8  | 1.9  |        | CPXRF     | 84BIS 01 |
|                        |       |      |        |           | 18.9                   | 0.8   |      | FAA    | 83GRO 02  |          |
|                        |       |      |        |           | 18.95                  | 1.65  |      | PAA    | 76KAT 04  |          |
|                        |       |      |        |           | 19                     |       |      | ITNA   | 80CRE 01  |          |
|                        | <     | 3000 |        | RTNA      | 84TJI 01               | 19    | 1    |        | RTNA      | 77MEL 01 |
| 70                     | 33    |      |        | RTNA      | 82ZEI 01               | 19    | 1.6  |        | ITNA      | 78BEH 01 |
|                        |       |      |        |           | 19                     | 1.6   |      | ITNA   | 77JUR 02  |          |
|                        |       |      |        |           | 19                     | 2.5   |      | ITNA   | 77HAM 01  |          |
|                        |       |      |        |           | 19.1                   | 0.8   |      | CPXRF  | 85CLA 01  |          |
| 9.9                    | 1.6   |      |        | CPXRF     | 80MAE 01               | 19.2  | 1.4  |        | ITNA      | 80MAE 01 |
| 13.2                   |       | 11   |        | SSMS      | 85VOS 01               | 19.3  | 2.8  |        | CPXRF     | 79MAN 01 |
| 15                     | 2     |      |        | 14NAA     | 81WIL 02               | 19.5  | 2.1  |        | ITNA      | 79ZEI 01 |
| 15                     | 2.5   | 34   |        | CPXRF     | 78JOL 01               | 19.8  | 1.4  | 6      | ITNA      | 74BEC 01 |
| 15.1                   | 4.4   |      |        | XRF       | 77SMI 04               | 19.9  |      | 17     | UU        | 74MAS 01 |
| 16.5                   | 1.2   | 5    |        | ITNA      | 80TOU 01               | 20    |      | 11     | SSMS      | 85VOS 01 |
| 16.6                   | 2.8   |      |        | RTNA      | 74SCH 03               | 20    | 2.4  |        | CPXRF     | 80KIR 01 |
| 16.7                   |       |      |        | CPXRF     | 84KAU 01               | 20    | 3    |        | CPXRF     | 78VIS 01 |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Rb (ug/g) cont.</u> |       |     |        |           | <u>Sb (ng/g) cont.</u> |       |     |        |           |
| 20.1                   |       |     | ITNA   | 73NAD 01  | 50                     |       |     | ITNA   | 79KUC 01  |
| 20.9                   | 2.5   | 6   | CPXRF  | 77WIL 03  | 55                     | 9     | 6   | ITNA   | 74BEC 01  |
| 21.2                   | 0.55  |     | AA     | 85EVA 01  | 69                     | 24    | 6   | ITNA   | 74BEC 01  |
| 23.3                   |       | 17  | UU     | 74MAS 01  | 70                     |       | 1   | IENA   | 79KUC 01  |
| 23.4                   |       | 17  | UU     | 74MAS 01  | 130                    | 170   | RD  | ITNA   | 79IMA 03  |
| 28                     |       |     | CPXRF  | 76ZEI 01  | 130                    | 170   | R   | ITNA   | 79IMA 01  |
| 28                     |       | 17  | UU     | 74MAS 01  | 300                    | 200   |     | ICPES  | 83OLI 01  |
| 29                     | 4     |     | CPAA   | 78MCG 01  |                        |       |     |        |           |
| <u>S (ug/g)</u>        |       |     |        |           | <u>Sc (ng/g)</u>       |       |     |        |           |
|                        |       |     |        |           | <                      | 0.5   | L   | RTNA   | 75LIE 01  |
| 3300                   | 1000  |     | CPXRF  | 79REN 02  | <                      | 0.5   | L   | RTNA   | 77LIE 01  |
| 6300                   | 2100  |     | NM     | 83LI 01   | <                      | 1     | L   | RTNA   | 80SLO 01  |
| 7200                   | 200   |     | TCGS   | 79FAI 01  | <                      | 1     |     | RTNA   | 75STE 02  |
| 7200                   | 400   |     | TCGS   | 77JUR 01  | <                      | 1     | L   | NAA    | 78GAN 01  |
| 7353                   | 81    |     | ICPES  | 84PRI 01  | <                      | 4     | L   | ITNA   | 78CAP 01  |
| 7410                   | 110   |     | ICPES  | 84MOR 01  | <                      | 800   | L   | 14NAA  | 81WIL 02  |
| 7440                   |       |     | CPXRF  | 84KAU 01  | 0.4                    |       | 17  | UU     | 74MAS 01  |
| 8150                   | 80    |     | CB     | 86BOW 01  | 0.6                    | 0.1   |     | RTNA   | 74HEN 01  |
| 8550                   | 150   |     | WXRF   | 86BOW 01  | 1                      |       |     | ITNA   | 73NAD 01  |
| 8800                   | 273   |     | WXRF   | 84ALK 01  | 1                      | 0.9   |     | RTNA   | 76GAU 01  |
| 9300                   | 100   |     | ICPES  | 85WHI 02  | 1.1                    |       |     | ITNA   | 84GLA 11  |
| 9500                   | 700   |     | CPXRF  | 80KIR 01  | 1.1                    | 0.1   |     | RTNA   | 79WAR 02  |
| 16200                  | 2000  |     | ITNA   | 79CHA 02  | 1.1                    | 0.3   |     | ITNA   | 78BEH 01  |
|                        |       |     |        |           | 1.2                    | 0.2   |     | ITNA   | 80MIC 01  |
|                        |       |     |        |           | 20                     | 6     |     | RTNA   | 77MEL 01  |
| <u>Sb (ng/g)</u>       |       |     |        |           | <u>Se (ug/g)</u>       |       |     |        |           |
| 4                      |       |     | RTNA   | 79MAY 01  |                        |       |     |        |           |
| 4                      |       |     | RTNA   | 75LIE 01  |                        |       |     |        |           |
| 4                      | 1     |     | RTNA   | 80SLO 01  | 0.228                  | 0.011 |     | FLUOR  | 74IHN 02  |
| 4.8                    | 0.5   |     | RTNA   | 77LIE 01  | 0.4                    | 0.27  |     | FAA    | 81MEY 01  |
| 4.8                    | 1.2   |     | RTNA   | 79ROS 02  | 0.69                   | 0.06  |     | NAA    | 78GAN 01  |
| 5                      |       |     | HAA    | 79EVA 01  | 0.75                   |       |     | FAA    | 74IHN 01  |
| 5                      | 2     |     | RTNA   | 79HOE 01  | 0.76                   |       | 7   | ICPES  | 84MIA 01  |
| 5.7                    | 0.5   |     | ITNA   | 86GRE 01  | 0.774                  |       |     | HAA    | 77IHN 01  |
| 7                      | 5     |     | ITNA   | 78BEH 01  | 0.8                    |       |     | CPXRF  | 84KAU 01  |
| 9                      | 3     |     | RTNA   | 74HEN 01  | 0.9                    |       | 11  | FAA    | 82VER 03  |
| 10                     | 2     |     | RTNA   | 78GAL 01  | 0.91                   |       |     | FLUOR  | 78EGA 01  |
| 10                     | 3     |     | ITNA   | 80MIC 01  | 0.92                   | 0.04  |     | HAA    | 82SUB 01  |
| 11                     | 9     |     | RTNA   | 74SCH 03  | 0.92                   | 0.18  | 6   | ITNA   | 74BEC 01  |
| 12                     |       |     | ITNA   | 80CRE 01  | 0.95                   | 0.03  |     | HAA    | 78EGA 01  |
| 12                     | 2     | 7   | RTNA   | 80GAL 02  | 0.97                   | 0.03  |     | ICPES  | 80HAA 01  |
| 14                     | 5     |     | NAA    | 78GAN 01  | 0.972                  |       |     | FLUOR  | 79TAM 01  |
| 14                     | 10    |     | ITNA   | 77ZIK 01  | 0.98                   | 0.01  |     | HAA    | 76FIO 01  |
| 15                     | 4     |     | RTNA   | 77TJI 01  | 0.98                   | 0.03  |     | DCPES  | 81CAR 02  |
| 16                     | 2     |     | ITNA   | 79CHA 02  | 0.98                   | 0.03  |     | GCMES  | 74TAL 02  |
| 16                     | 7     |     | ITNA   | 73COR 01  | 0.98                   | 0.05  |     | ITNA   | 76DIK 01  |
| 18                     |       | 17  | UU     | 74MAS 01  | 0.98                   | 0.06  |     | AA     | 79PAV 02  |
| 22.9                   |       | 17  | UU     | 74MAS 01  | 0.98                   | 0.15  | 34  | CPXRF  | 78JOL 01  |
| 26                     | 1     |     | RTNA   | 79WAR 02  | 1.00                   |       |     | HAA    | 78WEL 01  |
| 34                     |       |     | ITNA   | 73NAD 01  | 1.00                   |       | 11  | FAA    | 82VER 03  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Se (ug/g) cont.</u> |       |     |        |           | <u>Se (ug/g) cont.</u> |       |     |        |           |
| 1.00                   |       | 17  | UU     | 74MAS 01  | 1.07                   | 0.11  |     | ITNA   | 78HIR 01  |
| 1.00                   | 0.01  |     | ITNA   | 79SAT 01  | 1.07                   | 0.18  |     | RTNA   | 79PLA 01  |
| 1.00                   | 0.02  |     | FAA    | 76IHN 02  | 1.07                   | 0.19  |     | RTNA   | 79ROS 02  |
| 1.00                   | 0.04  |     | FAA    | 76IHN 01  | 1.08                   | 0.01  |     | CSV    | 83ADE 01  |
| 1.00                   | 0.1   |     | RTNA   | 75ABU 01  | 1.08                   | 0.01  |     | ITNA   | 74LIN 01  |
| 1.00                   | 0.1   | 11  | AA     | 85BYE 01  | 1.08                   | 0.015 |     | FAA    | 80NEV 01  |
| 1.00                   | 0.1   | 11  | HAA    | 82JON 01  | 1.08                   | 0.05  |     | ASV    | 76AND 01  |
| 1.00                   | 0.1   |     | ICPES  | 83OLI 01  | 1.08                   | 0.08  |     | AA     | 84MAT 01  |
| 1.00                   | 0.2   |     | CPXRF  | 80MAE 01  | 1.08                   | 0.12  |     | ITNA   | 77GUI 02  |
| 1.00                   | 0.4   |     | CPXRF  | 78VIS 01  | 1.08                   | 0.13  | 6   | ITNA   | 74BEC 01  |
| 1.01                   | 0.04  |     | ITNA   | 79CHA 04  | 1.08                   | 0.2   |     | FAA    | 79RAI 01  |
| 1.01                   | 0.06  |     | ITNA   | 84ALK 01  | 1.09                   | 0.01  |     | ASV    | 83ADE 01  |
| 1.02                   |       | 11  | HAA    | 85PIW 01  | 1.09                   | 0.02  |     | AA     | 79FLA 02  |
| 1.02                   |       |     | ITNA   | 81HAN 01  | 1.09                   | 0.02  | 34  | HAA    | 78FLA 01  |
| 1.02                   |       | 7   | ICPES  | 84MIA 01  | 1.09                   | 0.04  |     | ITNA   | 86GRE 01  |
| 1.02                   |       | 17  | UU     | 74MAS 01  | 1.09                   | 0.05  |     | RTNA   | 74ORV 01  |
| 1.02                   |       |     | ITNA   | 81MEY 01  | 1.09                   | 0.06  |     | HAA    | 81HAN 01  |
| 1.02                   | 0.03  |     | RTNA   | 77LIE 01  | 1.09                   | 0.08  |     | RTNA   | 79WAR 02  |
| 1.02                   | 0.03  |     | RTNA   | 75LIE 01  | 1.1                    |       |     | FAA    | 77YAS 01  |
| 1.02                   | 0.03  | 9   | ITNA   | 81SUZ 01  | 1.1                    |       |     | ITNA   | 80CRE 01  |
| 1.02                   | 0.04  |     | HAA    | 80AGE 02  | 1.1                    |       |     | ITNA   | 77OSB 01  |
| 1.02                   | 0.06  |     | IENA   | 86CHI 01  | 1.1                    |       |     | ITNA   | 78CAP 01  |
| 1.02                   | 0.438 | 5   | RTNA   | 82TIN 01  | 1.1                    |       | 11  | FAA    | 82VER 03  |
| 1.03                   |       | 6   | FAA    | 77SHU 01  | 1.1                    | 0.02  |     | XRF    | 81KNA 01  |
| 1.03                   | 0.03  |     | RTNA   | 77RAI 01  | 1.1                    | 0.05  | 11  | GC     | 81UCH 02  |
| 1.03                   | 0.03  |     | ITNA   | 79RAI 01  | 1.1                    | 0.06  | 11  | GC     | 81UCH 02  |
| 1.03                   | 0.04  | 11  | HAA    | 82JON 01  | 1.1                    | 0.06  |     | FLUOR  | 80KOH 01  |
| 1.03                   | 0.05  |     | ITNA   | 80MIC 01  | 1.1                    | 0.1   |     | GC     | 77POO 01  |
| 1.03                   | 0.09  |     | ITNA   | 81MOL 01  | 1.1                    | 0.1   | 9   | ITNA   | 80WAN 01  |
| 1.04                   |       |     | FLUOR  | 74IHN 01  | 1.1                    | 0.13  | 11  | RTNA   | 82POL 01  |
| 1.04                   | 0.03  |     | ITNA   | 86CHI 01  | 1.1                    | 0.17  | 9   | ITNA   | 77VOB 01  |
| 1.04                   | 0.07  |     | ITNA   | 74WES 01  | 1.1                    | 0.17  | 9   | ITNA   | 79PAV 02  |
| 1.04                   | 0.1   |     | RTNA   | 80KNA 01  | 1.1                    | 0.17  | 9   | ITNA   | 77VOB 01  |
| 1.045                  | 0.04  |     | ITNA   | 77EGA 01  | 1.1                    | 0.2   |     | EXRF   | 79GIA 01  |
| 1.05                   |       | 6   | FAA    | 77SHU 01  | 1.1                    | 0.2   |     | HAA    | 82MAY 01  |
| 1.05                   |       | 7   | ICPES  | 84MIA 01  | 1.1                    | 0.3   |     | ITNA   | 79ZEI 01  |
| 1.05                   | 0.05  |     | HAA    | 80VIJ 01  | 1.1                    | 0.4   | 5   | ITNA   | 80TOU 01  |
| 1.05                   | 0.12  |     | RTNA   | 80SLO 01  | 1.107                  | 0.15  |     | NAA    | 76GUZ 01  |
| 1.05                   | 0.19  |     | ITNA   | 79LAK 01  | 1.11                   | 0.02  |     | SSMS   | 77PAU 01  |
| 1.053                  | 0.051 |     | COLOR  | 79SZY 02  | 1.11                   | 0.03  |     | FAA    | 82JUL 01  |
| 1.06                   |       |     | FAA    | 78CAP 01  | 1.11                   | 0.04  |     | SSMS   | 77ROO 02  |
| 1.06                   | 0.06  |     | RTNA   | 78GAL 01  | 1.11                   | 0.05  |     | RTNA   | 74BYR 03  |
| 1.06                   | 0.06  | 7   | RTNA   | 80GAL 02  | 1.11                   | 0.06  |     | HAA    | 76IHN 02  |
| 1.06                   | 0.1   |     | RTNA   | 77TJI 01  | 1.11                   | 0.08  | 13  | ITNA   | 73BLO 02  |
| 1.06                   | 0.11  | 11  | RTNA   | 82POL 01  | 1.11                   | 0.09  | 12  | FAA    | 84RIN 01  |
| 1.069                  | 0.016 |     | ITNA   | 82DAM 01  | 1.11                   | 0.1   |     | ITNA   | 79CHA 02  |
| 1.07                   |       |     | RTNA   | 75STE 02  | 1.12                   | 0.02  |     | FLUOR  | 84ALF 01  |
| 1.07                   | 0.02  |     | AA     | 83RAP 01  | 1.12                   | 0.03  |     | ASV    | 75AND 01  |
| 1.07                   | 0.04  |     | GC-MS  | 81REA 02  | 1.12                   | 0.075 |     | HAA    | 81MEY 01  |
| 1.07                   | 0.06  | 5   | ITNA   | 81SUZ 01  | 1.12                   | 0.08  | 11  | RTNA   | 82POL 01  |
| 1.07                   | 0.1   |     | RTNA   | 79MAY 01  | 1.12                   | 0.08  |     | RTNA   | 72ROO 03  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Se (ug/g) cont.</u> |       |     |        |           | <u>Se (ug/g) cont.</u> |       |     |        |           |
| 1.12                   | 0.08  |     | RTNA   | 77ROO 02  | 1.26                   |       | 17  | UU     | 74MAS 01  |
| 1.12                   | 0.09  | 7   | RTNA   | 81KUC 01  | 1.26                   | 0.15  | 5   | FLUOR  | 81SUZ 01  |
| 1.12                   | 0.1   |     | ASV    | 81POS 01  | 1.28                   | 0.24  |     | CSV    | 83AHM 02  |
| 1.12                   | 0.12  | 6   | FLUOR  | 75OLS 01  | 1.3                    | 0.4   |     | RTNA   | 74SCH 03  |
| 1.13                   |       | 17  | UU     | 74MAS 01  | 1.4                    |       |     | FAA    | 82INU 01  |
| 1.13                   | 0.03  | 11  | ASV    | 84ADE 01  | 1.4                    | 0.1   |     | EXRF   | 80DYC 01  |
| 1.13                   | 0.03  |     | AA     | 85ADE 02  | 1.4                    | 0.5   | 6   | CPXRF  | 77WIL 03  |
| 1.13                   | 0.05  |     | ICPES  | 85NAK 01  | 1.7                    |       |     | ITNA   | 73NAD 01  |
| 1.13                   | 0.09  |     | ITNA   | 73COR 01  | 1.7                    | 0.1   |     | ITNA   | 78FUR 01  |
| 1.133                  | 0.122 |     | ITNA   | 82MOR 02  | 2.7                    |       |     | ICPES  | 85NAR 02  |
| 1.14                   | 0.04  |     | ITNA   | 78MCK 01  | 7.65                   | 0.277 | 5   | RTNA   | 82TIN 01  |
| 1.14                   | 0.05  |     | ITNA   | 80MAE 01  | 13.376                 | 0.926 | 5   | RTNA   | 82TIN 01  |
| 1.14                   | 0.09  |     | HAA    | 83KOL 01  | <u>Se(VI) (ug/g)</u>   |       |     |        |           |
| 1.14                   | 0.091 |     | HAA    | 82TAM 01  | 0.3                    | 0.07  |     | GC     | 81TOE 01  |
| 1.14                   | 0.11  |     | ITNA   | 77JUR 02  | 0.31                   | 0.11  |     | COLOR  | 81TOE 01  |
| 1.14                   | 0.11  |     | ITNA   | 79PAV 02  | <u>Si (ug/g)</u>       |       |     |        |           |
| 1.14                   | 0.11  |     | ITNA   | 77VOB 01  | 16.7                   | 0.67  |     | ITNA   | 75PIE 01  |
| 1.14                   | 0.11  |     | ITNA   | 78BEH 01  | 16.79                  | 1.84  |     | NAA    | 76GUZ 01  |
| 1.15                   | 0.02  |     | FLUOR  | 83KOH 01  | 19                     |       | 11  | SSMS   | 85VOS 01  |
| 1.15                   | 0.04  |     | ITNA   | 80LAK 01  | 246                    |       |     | CPXRF  | 84KAU 01  |
| 1.15                   | 0.08  | 11  | ASV    | 84ADE 01  | <u>Sm (ng/g)</u>       |       |     |        |           |
| 1.16                   |       |     | CSV    | 81HAN 01  | 1                      | 0.2   |     | RTNA   | 74HEN 01  |
| 1.16                   | 0.08  |     | FAA    | 84BAU 01  | 1.3                    | 0.4   |     | RTNA   | 80SLO 01  |
| 1.16                   | 0.09  | 12  | FAA    | 84RIN 01  | 1.5                    | 0.2   |     | RTNA   | 83TJI 01  |
| 1.17                   | 0.06  | 6   | FLUOR  | 75OLS 01  | 1.6                    |       |     | RTNA   | 82LAU 01  |
| 1.17                   | 0.18  |     | HAA    | 82JUL 01  | 1.6                    |       |     | RTNA   | 77LAU 02  |
| 1.18                   |       | 11  | HAA    | 85PIW 01  | 1.9                    | 0.2   |     | RTNA   | 76GAU 01  |
| 1.18                   | 0.14  |     | RTNA   | 74HEN 01  | 2                      | 0.2   |     | RTNA   | 86TSU 01  |
| 1.19                   | 0.11  | 13  | ITNA   | 73BLO 02  | 2.8                    |       |     | ITNA   | 80CRE 01  |
| 1.2                    |       | 1   | IENA   | 79KUC 01  | 35                     | 24    |     | RTNA   | 74SCH 03  |
| 1.2                    |       |     | ITNA   | 79KUC 01  | <u>Sn (ng/g)</u>       |       |     |        |           |
| 1.2                    |       |     | FAA    | 77YAS 01  | <                      | 240   | L   | RTNA   | 81KUC 01  |
| 1.2                    |       |     | ICPES  | 80HAA 01  | <                      | 600   |     | RTNA   | 75LIE 01  |
| 1.2                    |       | 7   | RTNA   | 81KUC 01  | <                      | 600   | L   | RTNA   | 77LIE 01  |
| 1.2                    | 0.1   |     | ITNA   | 80WAN 01  | <                      | 1500  | L   | ICPES  | 78CAP 01  |
| 1.2                    | 0.1   |     | RTNA   | 77MEL 01  | 10                     |       |     | HAA    | 79EVA 01  |
| 1.2                    | 0.1   | 7   | RTNA   | 80GAL 02  | 20                     | 3     |     | RTNA   | 83GRE 02  |
| 1.2                    | 0.1   |     | ITNA   | 81KRI 01  | 20                     | 6     |     | ITNA   | 86GRE 01  |
| 1.2                    | 0.1   |     | NAA    | 77GIL 01  | 21                     | 3     |     | RTNA   | 77BYR 01  |
| 1.2                    | 0.1   |     | RTNA   | 77GIL 03  | 220                    | 180   |     | ICPES  | 80HAA 01  |
| 1.2                    | 0.1   |     | CPXRF  | 77WIL 02  | <u>Se (ug/g) cont.</u> |       |     |        |           |
| 1.2                    | 0.11  |     | RTNA   | 77OMI 01  | 1.26                   |       | 17  | UU     | 74MAS 01  |
| 1.2                    | 0.155 |     | ITNA   | 77HAM 01  | 1.26                   | 0.15  | 5   | FLUOR  | 81SUZ 01  |
| 1.2                    | 0.16  |     | HAA    | 81REA 01  | 1.28                   | 0.24  |     | CSV    | 83AHM 02  |
| 1.2                    | 0.2   | 11  | AA     | 85BYE 01  | 1.3                    | 0.4   |     | RTNA   | 74SCH 03  |
| 1.2                    | 0.2   |     | HAA    | 81COX 01  | 1.4                    |       |     | FAA    | 82INU 01  |
| 1.204                  | 0.124 |     | HAA    | 77IHN 03  | 1.4                    | 0.1   |     | EXRF   | 80DYC 01  |
| 1.22                   | 0.04  |     | COLOR  | 81TOE 01  | 1.4                    | 0.5   | 6   | CPXRF  | 77WIL 03  |
| 1.23                   |       | 17  | UU     | 74MAS 01  | 1.7                    |       |     | ITNA   | 73NAD 01  |
| 1.24                   | 0.04  |     | GC     | 81TOE 01  | 1.7                    | 0.1   |     | ITNA   | 78FUR 01  |
| 1.24                   | 0.3   |     | CPXRF  | 85CLA 01  | 2.7                    |       |     | ICPES  | 85NAR 02  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sr (ng/g)</u> |       |     |        |           | <u>Tm (ng/g)</u> |       |     |        |           |
| 100              |       | 11  | SSMS   | 85VOS 01  | <                | 0.3   | L   | RTNA   | 76GAU 01  |
| 150              | 20    |     | RTNA   | 76GAU 01  | 0.1              |       |     | RTNA   | 82LAU 01  |
| 160              |       |     | ICPES  | 78DAH 01  | 0.15             |       |     | RTNA   | 77LAU 02  |
| 160              | 20    |     | FAA    | 82SUZ 03  |                  |       |     |        |           |
| 300              | 60    |     | ICPES  | 79ABE 01  | <u>U (ng/g)</u>  |       |     |        |           |
| 500              | 180   | 34  | CPXRF  | 78JOL 01  | <                | 1     |     | DNA    | 86GAU 01  |
| 550              | 440   |     | AA     | 85EVA 01  | <                | 20    | L   | ITNA   | 74WEA 01  |
| 2000             | 800   |     | 14NAA  | 81WIL 02  | <                | 100   | L   | RTNA   | 76GAU 01  |
| <u>Ta (ng/g)</u> |       |     |        |           | <                | 2000  | L   | EXRF   | 79GIA 01  |
| 3                |       |     | ITNA   | 80CRE 01  | 0.99             | 0.25  | 35  | DNA    | 80GLA 04  |
|                  |       |     |        |           | 1                | 1.6   |     | DNA    | 84GLA 02  |
|                  |       |     |        |           | 20               | 48    | R   | DNA    | 81GLA 03  |
| <u>Tb (ng/g)</u> |       |     |        |           | <u>V (ng/g)</u>  |       |     |        |           |
| <                | 0.2   |     | RTNA   | 83TJI 01  | <                | 20    | L   | RTNA   | 77BUO 01  |
| <                | 1.6   | L   | RTNA   | 76GAU 01  | <                | 20    | L   | ITNA   | 74HOF 01  |
| 0.17             |       |     | RTNA   | 82LAU 01  | <                | 40    | L   | ITNA   | 74HOF 01  |
| 0.18             |       |     | RTNA   | 77LAU 02  | 15               | 5     |     | COLOR  | 82KIR 01  |
| 2                |       |     | ITNA   | 80CRE 01  | 33               | 3     |     | RTNA   | 79WAR 02  |
| <u>Te (ng/g)</u> |       |     |        |           | 55               | 1     |     | FAA    | 77MYR 01  |
| 90               | 15    |     | RTNA   | 77DIK 01  | 56               |       | 17  | UU     | 74MAS 01  |
|                  |       |     |        |           | 56               | 7     |     | UU     | 73STE 01  |
|                  |       |     |        |           | 58.6             | 1.6   |     | RTNA   | 78BYR 01  |
| <u>Th (ng/g)</u> |       |     |        |           | 59               |       |     | NAA    | 80KOS 02  |
| <                | 1000  | L   | EXRF   | 79GIA 01  | 60               |       |     | ICPES  | 80HAA 01  |
| 3                | 6     | R*  | RTNA   | 80SLO 01  | 60               | 2     |     | RTNA   | 80WOI 01  |
| 6.8              |       |     | ITNA   | 80CRE 01  | 60               | 5     |     | RTNA   | 79CHA 02  |
| <u>Ti (ug/g)</u> |       |     |        |           | 61.5             | 2     |     | RTNA   | 79COR 01  |
| <                | 0.15  | L   | ICPES  | 78CAP 01  | 61.5             | 2     |     | RTNA   | 81COR 02  |
| <                | 3.3   |     | CPXRF  | 84KAU 01  | 65               | 2     |     | RTNA   | 82BYR 01  |
| <                | 4     | L   | 14NAA  | 81WIL 02  | 66.2             | 4.9   |     | RTNA   | 78ALL 04  |
| <                | 11    | L   | EXRF   | 79GIA 01  | 90               | 60    | 11  | ICPES  | 82JON 01  |
| 0.7              | 0.2   |     | COLOR  | 82KIR 02  | 320              | 80    |     | RTNA   | 77GUI 03  |
| 1.7              | 0.2   |     | ICPES  | 79ABE 01  | 370              |       | 11  | SSMS   | 85VOS 01  |
| 2                | 1     |     | CPAA   | 77ZIK 01  | 400              |       | 11  | SSMS   | 85VOS 01  |
| 3.2              | 1     |     | 14NAA  | 81WIL 01  | 460              |       |     | ITNA   | 78CAP 01  |
| 3.8              |       | 11  | SSMS   | 85VOS 01  | 500              | 100   |     | ITNA   | 77ZIK 01  |
| 4.7              |       | 11  | SSMS   | 85VOS 01  | 600              | 100   |     | ICPES  | 79ABE 01  |
| <u>Tl (ng/g)</u> |       |     |        |           | <u>W (ng/g)</u>  |       |     |        |           |
| <                | 2     | 11  | ASV    | 84LIE 01  | 3.8              |       |     | RTNA   | 84BYR 01  |
| <                | 2     | 11  | ASV    | 84LIE 01  | 5                |       | 17  | UU     | 74MAS 01  |
| 2                |       | 11  | ASV    | 84LIE 01  | 5                | 3     |     | RTNA   | 74SCH 03  |
| 48               | 3     |     | SSMS   | 77PAU 01  | 12               |       |     | RTNA   | 76GAU 01  |
|                  |       |     |        |           | 15               |       |     | RTNA   | 75STE 02  |
|                  |       |     |        |           | 30               |       | 17  | UU     | 74MAS 01  |
|                  |       |     |        |           | 700              | 100   |     | RTNA   | 80SLO 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Y (ug/g)</u>  |       |     |        |           | <u>Zn (ug/g) cont.</u> |       |     |        |           |
| <                | 1     | L   | EXRF   | 79GIA 01  | 123.8                  | 1.2   |     | FAA    | 74GRO 01  |
| <                | 14    | L   | 14NAA  | 81WIL 01  | 124                    |       | 17  | UU     | 74MAS 01  |
| <u>Yb (ng/g)</u> |       |     |        |           | 124                    |       | 6   | POL    | 72SIN 01  |
| <                | 0.1   |     | RTNA   | 83TJI 01  | 124                    | 7     | 7   | AA     | 73TAL 01  |
| 0.28             |       |     | RTNA   | 82LAU 01  | 124                    | 7.3   | 11  | FAA    | 74TAL 01  |
| 0.285            |       |     | RTNA   | 77LAU 02  | 124                    | 10    | D   | RTNA   | 74WES 01  |
| 0.48             | 0.09  |     | RTNA   | 76GAU 01  | 124                    | 10    |     | ICPES  | 80SCH 08  |
| 830              |       |     | ITNA   | 73NAD 01  | 124                    | 14    |     | ICPES  | 80SCH 05  |
| <u>Zn (ug/g)</u> |       |     |        |           | 124.4                  |       |     | CPXRF  | 79MAN 01  |
| 13.17            | 17.59 | R   | AA     | 79MON 01  | 125                    |       |     | RTNA   | 75HAL 01  |
| 32               |       |     | ASV    | 74COP 01  | 125                    |       |     | ITNA   | 79KUC 01  |
| 65               | 15    |     | FAA    | 77FUJ 01  | 125                    |       |     | RTNA   | 75STE 02  |
| 78               | 25    |     | 14NAA  | 81WIL 01  | 125                    | 2     |     | AA     | 79FLA 02  |
| 93               | 17    | 12  | FAA    | 85CAR 02  | 125                    | 5     | 7   | RTNA   | 80GAL 02  |
| 98               | 122   | RD  | ITNA   | 79IMA 03  | 125                    | 5     |     | RTNA   | 77GIL 03  |
| 98               | 122   | R   | ITNA   | 79IMA 01  | 125                    | 6     |     | NAA    | 77GIL 01  |
| 101              |       | 17  | UU     | 74MAS 01  | 125.7                  | 10.6  | 34  | AA     | 83RAP 01  |
| 102              |       |     | FAA    | 83ATS 01  | 126                    |       |     | ITNA   | 77HAM 01  |
| 104              |       |     | CPXRF  | 78UEM 01  | 126                    |       |     | CPXRF  | 78JOL 01  |
| 106              | 31    | 12  | FAA    | 85CAR 02  | 126                    | 2     |     | FAA    | 75SLA 01  |
| 112              |       |     | XRF    | 80SUZ 02  | 126                    | 4     | 7   | ITNA   | 80MAE 01  |
| 112              | 15    |     | ICPES  | 81BLA 01  | 126                    | 4     |     | AA     | 73TAL 01  |
| 112.6            | 1.1   |     | FAA    | 81CLE 02  | 126                    | 4     |     | FAA    | 74TAL 01  |
| 113              | 5     |     | FAA    | 84ROS 01  | 126                    | 4     |     | SSMS   | 77PAU 01  |
| 116              |       |     | ITNA   | 73NAD 01  | 126                    | 5     |     | ITNA   | 81MOL 01  |
| 116              | 18    |     | CPXRF  | 80MAE 01  | 126                    | 8     |     | FAA    | 79WAR 01  |
| 117              | 13    |     | AA     | 79MAN 01  | 126                    | 9     |     | RTNA   | 74ORV 01  |
| 117.2            | 10    |     | RTNA   | 83DAN 01  | 126                    | 71    |     | ITNA   | 82KIM 01  |
| 118              |       | 11  | ASV    | 81DAN 01  | 127                    |       | 11  | FAA    | 81DAN 01  |
| 118              | 4     | 6   | POL    | 72SIN 01  | 127                    |       | 1   | IENA   | 79KUC 01  |
| 118              | 21    |     | RTNA   | 82KIM 01  | 127                    | 1     |     | RTNA   | 80SLO 01  |
| 118.2            | 7.8   |     | IENA   | 75MAZ 01  | 127                    | 4     |     | AA     | 80UCH 01  |
| 119              |       | 6   | POL    | 72SIN 01  | 127                    | 8     | 11  | RTNA   | 74WES 01  |
| 120              |       | 17  | UU     | 74MAS 01  | 127                    | 9     |     | ITNA   | 81KRI 01  |
| 120              | 6     | 11  | ICPES  | 81BLA 02  | 127.9                  | 9.1   | 6   | ITNA   | 74BEC 01  |
| 120              | 12    |     | FAA    | 84HAR 02  | 128                    |       |     | DCPES  | 78NAK 01  |
| 121              | 10    | 7   | RTNA   | 84FAR 02  | 128                    |       | 7   | RTNA   | 81KUC 01  |
| 121              | 13    |     | ICPES  | 85FAS 01  | 128                    | 3     |     | FAA    | 81CLE 01  |
| 121.9            |       |     | RTNA   | 74RAV 01  | 128                    | 3.6   | 11  | AA     | 74WES 01  |
| 122              |       | 11  | FAA    | 81DAN 01  | 128                    | 5     |     | ITNA   | 79SAT 01  |
| 122              | 3     |     | NAA    | 78GAN 01  | 128                    | 6     |     | AA     | 75HIN 01  |
| 122              | 3     |     | EXRF   | 80DYC 01  | 128                    | 7     |     | RTNA   | 79DER 01  |
| 122              | 9     |     | ITNA   | 79LAK 01  | 128                    | 10    |     | CPXRF  | 80KIR 01  |
| 123              | 5     |     | ITNA   | 74WES 01  | 128                    | 12    |     | ITNA   | 79CHA 02  |
| 123              | 8     | 7   | RTNA   | 84FAR 02  | 128                    | 14    |     | EXRF   | 77NIE 01  |
| 123              | 25    |     | ITNA   | 78FUR 01  | 128                    | 14    |     | CPAA   | 77ZIK 01  |
| 123              | 26    |     | ICPES  | 84BLA 01  | 128                    | 26    |     | ICPES  | 82AZI 02  |
|                  |       |     |        |           | 128.6                  |       |     | AA     | 79LOC 01  |
|                  |       |     |        |           | 128.6                  | 0.7   |     | ITNA   | 82DAM 01  |
|                  |       |     |        |           | 129                    |       |     | ICPES  | 80HAA 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g) cont.</u> |       |     |        |           | <u>Zn (ug/g) cont.</u> |       |     |        |           |
| 129                    |       |     | ICPES  | 84NAD 01  | 134                    | 2     |     | EXRF   | 79GIA 01  |
| 129                    |       | 1   | IENA   | 79KUC 01  | 134                    | 3     |     | AA     | 79WAR 01  |
| 129                    |       |     | ITNA   | 80CRE 01  | 134                    | 4     | 1   | AA     | 77UCH 02  |
| 129                    | 1.5   |     | ITNA   | 86CHI 01  | 134                    | 5     | 7   | AE+AF  | 73TAL 01  |
| 129                    | 3     |     | ITNA   | 74DON 01  | 134                    | 5     |     | FAE    | 74TAL 01  |
| 129                    | 4     |     | RTNA   | 79WAR 02  | 134                    | 5     |     | RTNA   | 77TJI 01  |
| 129                    | 4     |     | ITNA   | 79WAR 01  | 134                    | 6     | 11  | ICPES  | 82JON 01  |
| 129                    | 8     |     | ITNA   | 80LAK 01  | 134                    | 7     | 11  | ICPES  | 82JON 01  |
| 129                    | 16    | 32  | CPXRF  | 77CRO 01  | 134                    | 7.2   |     | RTNA   | 79PLA 01  |
| 129.2                  | 6     |     | ITNA   | 84ALK 01  | 134                    | 10    | 7   | AE+AF  | 73TAL 01  |
| 130                    |       |     | OES    | 75BOL 02  | 134                    | 10    |     | FAE    | 74TAL 01  |
| 130                    |       | 11  | AA     | 81MOH 01  | 135                    |       | 17  | UU     | 74MAS 01  |
| 130                    | 4     | 11  | ICPES  | 81BLA 02  | 135                    |       |     | AE+AF  | 79ULL 01  |
| 130                    | 4.5   |     | AA     | 84HUD 01  | 135                    |       |     | ICPES  | 78CAP 01  |
| 130                    | 4.5   | D   | AA     | 84HUD 03  | 135                    | 1     |     | ITNA   | 74LIN 01  |
| 130                    | 5     | 1   | ICPES  | 78SUD 01  | 135                    | 2     | 11  | ICPES  | 82JON 01  |
| 130                    | 7     |     | CPXRF  | 78VIS 01  | 135                    | 2     |     | ICPES  | 85WOL 01  |
| 130                    | 13    |     | FAA    | 80LON 01  | 135                    | 4     | 11  | ICPES  | 82JON 01  |
| 130                    | 22    |     | AA     | 82HAR 01  | 135                    | 5     |     | CPXRF  | 85CLA 01  |
| 131                    |       |     | AF     | 85NAR 02  | 135                    | 5     |     | RTNA   | 75LIE 01  |
| 131                    |       | 14  | FAA    | 80CHA 08  | 135                    | 5     |     | RTNA   | 77LIE 01  |
| 131                    |       | 17  | UU     | 74MAS 01  | 135                    | 6     |     | IENA   | 86CHI 01  |
| 131                    | 1     |     | AA     | 75ABU 01  | 135                    | 7     |     | AA     | 84CUB 01  |
| 131                    | 1     |     | AA     | 75EPS 01  | 136                    |       | 11  | XRF    | 83PEL 01  |
| 131                    | 1     |     | ICPES  | 79MCQ 02  | 136                    |       | 17  | UU     | 74MAS 01  |
| 131                    | 1.4   |     | AA     | 80AGE 01  | 136                    | 1.8   | 6   | DCPES  | 83FRA 01  |
| 131                    | 2     |     | ICPES  | 79MCQ 01  | 136                    | 3     |     | HPLC   | 85SAI 01  |
| 131                    | 4     |     | ITNA   | 80MIC 01  | 136                    | 6     |     | RTNA   | 76GAU 01  |
| 131                    | 13.5  |     | PAA    | 76KAT 04  | 136                    | 9     |     | RTNA   | 74HEN 01  |
| 131                    | 37    |     | EXRF   | 84KNA 01  | 137                    | 2     |     | ASV    | 85ADE 01  |
| 131.8                  | 6.5   |     | ITNA   | 73COR 01  | 137                    | 4     |     | ITNA   | 74GUI 01  |
| 132                    | 1     |     | AF     | 75EPS 01  | 137                    | 9     | 5   | ITNA   | 80TOU 01  |
| 132                    | 3     |     | GC     | 81BLA 01  | 137.2                  | 5.75  |     | NAA    | 76GUZ 01  |
| 132                    | 3.3   | 6   | CPXRF  | 77WIL 03  | 138                    | 3     |     | ITNA   | 86GRE 01  |
| 132                    | 5     |     | AA     | 79MCQ 01  | 139                    |       | 17  | UU     | 74MAS 01  |
| 132                    | 6     | 7   | RTNA   | 81KUC 01  | 139                    |       | 11  | SSMS   | 85VOS 01  |
| 132                    | 7     | 1   | AA     | 77UCH 02  | 139                    | 5     |     | ICPES  | 82EVA 01  |
| 132                    | 7     |     | AA     | 80IID 01  | 140                    |       |     | ITNA   | 77OSB 01  |
| 132                    | 10    |     | CPXRF  | 81SAI 01  | 140                    |       | 11  | AA     | 81MOH 01  |
| 132                    | 15    |     | ICPES  | 83SCH 04  | 140                    |       |     | ICPES  | 78DAH 01  |
| 133                    |       | 11  | ASV    | 81DAN 01  | 140                    | 2.4   | 6   | DCPES  | 83FRA 01  |
| 133                    |       |     | CPXRF  | 84KAU 01  | 140                    | 16    |     | RTNA   | 77KUS 01  |
| 133                    |       | 14  | FAA    | 80CHA 08  | 140                    | 29    |     | XRF    | 77SMI 04  |
| 133                    | 4     | 7   | RTNA   | 84FAR 02  | 141                    | 2     | D   | DCPES  | 81REE 01  |
| 133                    | 6     |     | ICPES  | 78JAC 01  | 141                    | 2     |     | DCPES  | 79REE 01  |
| 133                    | 7     |     | ITNA   | 77JUR 02  | 141                    | 16    | 5   | RTNA   | 74SCH 03  |
| 133                    | 7     |     | ITNA   | 78BEH 01  | 141.7                  | 5.3   | 6   | ITNA   | 74BEC 01  |
| 133.9                  | 6.8   |     | ITNA   | 79ZEI 01  | 142                    |       |     | AA     | 80EVA 01  |
| 134                    |       |     | ICPES  | 85NAR 02  | 142                    | 4     |     | AA     | 82EVA 01  |
| 134                    |       | 17  | UU     | 74MAS 01  | 142                    | 11    |     | ITNA   | 77ZIK 01  |
| 134                    | 2     |     | RTNA   | 77MEL 01  | 143                    | 19    |     | ICPES  | 79ABE 01  |

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

| Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g) cont.</u> |       |     |        |           |
| 144                    | 12    | 6   | CPXRF  | 77WIL 03  |
| 144                    | 17    |     | CPXRF  | 84BIS 01  |
| 145                    |       |     | FAA    | 78CAP 01  |
| 145                    |       | 11  | SSMS   | 85VOS 01  |
| 145                    | 5     |     | CPXRF  | 77WIL 02  |
| 145.5                  |       |     | ITNA   | 82AKA 01  |
| 146                    | 12    |     | ICPES  | 82AZI 01  |
| 147                    | 7.3   | 11  | AA     | 74WES 01  |
| 148                    | 15    |     | CPAA   | 78MCG 01  |
| 148                    | 74    |     | CPXRF  | 76ZEI 01  |
| 150                    | 10    |     | PAA    | 76WIL 01  |
| 153                    | 2     |     | ICPES  | 85WHI 02  |
| 156                    | 6.2   |     | CPXRF  | 81ROB 02  |
| 157                    | 20    | 1   | ICPES  | 78SUD 01  |
| 159                    | 8     | 5   | RTNA   | 74SCH 03  |
| 160                    |       | 17  | UU     | 74MAS 01  |
| 160                    |       | 17  | UU     | 74MAS 01  |
| 162                    | 31    | 32  | CPXRF  | 77CRO 01  |
| 200                    | 40    |     | 14NAA  | 81WIL 02  |
| <u>Zr (ug/g)</u>       |       |     |        |           |
| <                      | 0.5   | L   | 14NAA  | 81WIL 02  |
| <                      | 3     | L   | 14NAA  | 81WIL 01  |
| <                      | 3     | L   | EXRF   | 79GIA 01  |
| 0.09                   | 0.08  |     | PAA    | 84SAT 01  |
| 1.6                    |       | 11  | SSMS   | 85VOS 01  |
| 3.4                    | 0.4   |     | PAA    | 79CHA 02  |
| 4                      | 3     |     | CPAA   | 77ZIK 01  |

TABLE 1577A-1: COMPILED DATA FOR NBS SRM 1577A BOVINE LIVER (revised 3/1/86)

| ELEMENT | UNITS | NBS           |                 | CONSENSUS |               | MEDIAN | RANGE         | AA             |                | NAA       |           | XRF       | OTHER METHODS |      |
|---------|-------|---------------|-----------------|-----------|---------------|--------|---------------|----------------|----------------|-----------|-----------|-----------|---------------|------|
|         |       | Mean ± SD     | (n)             | Mean ± SD | (n)           |        |               | Mean ± SD      | (n)            | Mean ± SD | (n)       |           | Method        |      |
| Ag      | ng/g  | 40 ± 10       | ---             | ---       | ---           | ---    | ---           | ---            | ---            | ---       | ---       | ---       | ---           | ---  |
| Al      | ug/g  | 2             | 3.4 (1)         | ---       | ---           | ---    | ---           | ---            | 3.4 (1)        | ---       | ---       | ---       | ---           | ---  |
| As      | ng/g  | 47 ± 6        | 48 ± 8 (3)      | 49        | 40 - 56       | 49     | 40 - 56       | 40 (1)         | 52.5 (2)       | ---       | ---       | ---       | ---           | ---  |
| Br      | ug/g  | 9             | 9.6 ± 1.3 (4)   | 9         | 8.5 - 11.2    | 9      | 8.5 - 11.2    | ---            | 9.6 ± 1.2 (4)  | ---       | ---       | ---       | ---           | ---  |
| Ca      | ug/g  | 120 ± 7       | 121 ± 5 (26)    | 123       | 111.3 - 129.7 | 123    | 111.3 - 129.7 | 121 ± 5 (25)   | ---            | ---       | 127 (1)   | 145 (1)   | ICPMS         | ---  |
| Cd      | ng/g  | 440 ± 60      | 455 (2)         | ---       | 440 - 470     | ---    | 440 - 470     | 470 (1)        | 440 (1)        | ---       | ---       | ---       | ---           | ---  |
| Cl      | ug/g  | 2800 ± 100    | 2700 ± 110 (4)  | 2650      | 2570 - 2800   | 2650   | 2570 - 2800   | ---            | 2700 ± 110 (4) | ---       | ---       | ---       | ---           | ---  |
| Co      | ng/g  | 210 ± 50      | 249 (2)         | ---       | 244 - 254     | ---    | 244 - 254     | ---            | 249 (2)        | ---       | ---       | ---       | ---           | ---  |
| Cr      | ug/g  | ---           | 1.0 (1)         | ---       | ---           | ---    | ---           | ---            | 1.0 (1)        | ---       | ---       | ---       | ---           | ---  |
| Cu      | ug/g  | 158 ± 7       | 149 ± 14 (30)   | 153.6     | 114.2 - 164   | 153.6  | 114.2 - 164   | 149 ± 14 (24)  | 155 ± 12 (3)   | ---       | 145 (2)   | 160 (1)   | ICPMS         | ---  |
| Fe      | ug/g  | 194 ± 20      | 155 ± 17 (25)   | 155.9     | 116.1 - 181   | 155.9  | 116.1 - 181   | 153 ± 16 (22)  | 181 (1)        | ---       | 163.5 (2) | ---       | ---           | ---  |
| Hg      | ng/g  | 4 ± 2         | 3.15 (2)        | ---       | 3 - 3.3       | ---    | 3 - 3.3       | ---            | 3.15 (2)       | ---       | ---       | ---       | ---           | ---  |
| I       | ng/g  | ---           | 243 (2)         | ---       | 240 - 246     | ---    | 240 - 246     | ---            | 243 (2)        | ---       | ---       | ---       | ---           | ---  |
| K       | %     | 0.996 ± 0.007 | 1.00 ± 0.13 (3) | 0.95      | 0.894 - 1.15  | 0.95   | 0.894 - 1.15  | ---            | 1.05 (2)       | ---       | ---       | 0.894 (1) | ICPMS         | ---  |
| Mg      | ug/g  | 600 ± 15      | 612 ± 36 (3)    | 624       | 571 - 640     | 624    | 571 - 640     | ---            | 606 (2)        | ---       | ---       | 624 (1)   | ICPMS         | ---  |
| Mn      | ug/g  | 9.9 ± 0.8     | 9.9 ± 0.4 (34)  | 9.8       | 9.1 - 10.8    | 9.8    | 9.1 - 10.8    | 9.9 ± 0.4 (29) | 9.7 ± 0.6 (3)  | ---       | 10.5 (1)  | 9.1 (1)   | ICPMS         | ---  |
| Mo      | ug/g  | 3.5 ± 0.5     | 3.43 (2)        | ---       | 3.4 - 3.47    | ---    | 3.4 - 3.47    | ---            | 3.44 (2)       | ---       | ---       | ---       | ---           | ---  |
| N       | %     | 10.7          | ---             | ---       | ---           | ---    | ---           | ---            | ---            | ---       | ---       | ---       | ---           | ---  |
| Na      | ug/g  | 2430 ± 130    | 2410 ± 220 (3)  | 2450      | 2170 - 2600   | 2450   | 2170 - 2600   | ---            | 2525 (2)       | ---       | ---       | 2170 (1)  | ICPMS         | ---  |
| P       | %     | 1.11 ± 0.04   | 1.18 (1)        | ---       | ---           | ---    | ---           | ---            | ---            | ---       | ---       | 1.18 (1)  | ICPMS         | ---  |
| Pb      | ng/g  | 135 ± 15      | 168 ± 29 (4)    | 150       | 150 - 210     | 150    | 150 - 210     | 150 (1)        | ---            | ---       | ---       | ---       | ---           | ---  |
| Rb      | ug/g  | 12.5 ± 0.1    | 12.2 (1)        | ---       | ---           | ---    | ---           | ---            | ---            | ---       | ---       | ---       | ---           | ---  |
| S       | ug/g  | 7800 ± 100    | 8300 ± 500 (4)  | 7900      | 7845 - 8860   | 7900   | 7845 - 8860   | ---            | ---            | ---       | 8860 (1)  | 7845 (1)  | IDMS          | ---  |
| S       | ug/g  | ---           | ---             | ---       | ---           | ---    | ---           | ---            | ---            | ---       | ---       | ---       | ---           | ---  |
| S       | ug/g  | ---           | ---             | ---       | ---           | ---    | ---           | ---            | ---            | ---       | ---       | ---       | ---           | ---  |
| S-32/34 | ratio | ---           | 22.555 (1)      | ---       | ---           | ---    | ---           | ---            | ---            | ---       | ---       | ---       | ---           | ---  |
| S-33/34 | ratio | ---           | 0.1776 (1)      | ---       | ---           | ---    | ---           | ---            | ---            | ---       | ---       | ---       | ---           | ---  |
| Sb      | ng/g  | 3             | 31 (1)          | ---       | ---           | ---    | ---           | ---            | 31 (1)         | ---       | ---       | ---       | ---           | ---  |
| Sc      | ng/g  | ---           | 0.8 (1)         | ---       | ---           | ---    | ---           | ---            | 0.8 (1)        | ---       | ---       | ---       | ---           | ---  |
| Se      | ng/g  | 710 ± 70      | 780 ± 200 (5)   | 779       | 580 - 1100    | 779    | 580 - 1100    | 875 (2)        | 685 (2)        | ---       | 779 (1)   | ---       | ---           | ---  |
| Sr      | ng/g  | 138 ± 3       | ---             | ---       | ---           | ---    | ---           | ---            | ---            | ---       | ---       | ---       | ---           | ---  |
| Tl      | ng/g  | 3             | ---             | ---       | ---           | ---    | ---           | ---            | ---            | ---       | ---       | ---       | ---           | ---  |
| U       | ng/g  | 0.71 ± 0.03   | 0.704 (1)       | ---       | ---           | ---    | ---           | ---            | < 1            | ---       | ---       | ---       | 0.704 (1)     | IDMS |
| V       | ng/g  | 99 ± 8        | 97 (2)          | ---       | 96 - 98.7     | ---    | 96 - 98.7     | ---            | 96 (1)         | ---       | ---       | ---       | 98.7 (1)      | IDMS |
| Zn      | ug/g  | 123 ± 8       | 122 ± 4 (27)    | 122.8     | 111.6 - 130.1 | 122.8  | 111.6 - 130.1 | 122 ± 4 (25)   | 127 (1)        | ---       | 126 (1)   | ---       | ---           | ---  |

TABLE 1577A-2: INDIVIDUAL DATA FOR NBS SRM 1577A (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (ug/g)</u> |       |     |        |           | <u>Cd (ng/g)</u> |       |     |        |           |
| 3.4              | 0.8   |     | ITNA   | 84GLA 11  | 440              | 10    |     | RTNA   | 84BYR 02  |
|                  |       |     |        |           | 470              | 10    |     | FAA    | 85SAL 01  |
| <u>As (ng/g)</u> |       |     |        |           | <u>Cl (ug/g)</u> |       |     |        |           |
| 40               | 10    |     | HAA    | 85SAL 01  | 2570             |       |     | ITNA   | 85GAU 04  |
| 49               | 4     |     | RTNA   | 85GAU 04  | 2650             | 300   |     | IENA   | 84GLA 11  |
| 56               | 3     |     | RTNA   | 84BYR 02  | 2780             | 150   |     | ITNA   | 84GLA 11  |
|                  |       |     |        |           | 2800             | 100   |     | ITNA   | 86KRA 01  |
| <u>Br (ug/g)</u> |       |     |        |           | <u>Co (ng/g)</u> |       |     |        |           |
| 8.5              | 1     |     | IENA   | 84GLA 11  | 244              | 12    |     | ITNA   | 86KRA 01  |
| 9                | 0.9   |     | ITNA   | 84GLA 11  | 254              | 21    |     | RTNA   | 84BYR 02  |
| 9.7              |       |     | ITNA   | 85GAU 04  |                  |       |     |        |           |
| 11.2             |       |     | IENA   | 85GAU 04  |                  |       |     |        |           |
| <u>Ca (ug/g)</u> |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| 25               | 1.1   | 11  | AA     | 84IMA 02  | 1                | 0.3   |     | ITNA   | 86KRA 01  |
| 26.1             | 1.4   | 11  | AA     | 84IMA 02  |                  |       |     |        |           |
| 111.3            |       | 11  | AA     | 84IMA 02  |                  |       |     |        |           |
| 112.9            |       | 11  | AA     | 84IMA 02  |                  |       |     |        |           |
| 113.2            | 2.6   | 11  | AA     | 84IMA 02  | 62.3             |       | 11  | AA     | 84IMA 02  |
| 113.5            |       | 11  | AA     | 84IMA 02  | 73.7             |       | 11  | AA     | 84IMA 02  |
| 115.7            | 3.5   | 11  | AA     | 84IMA 02  | 100.5            | 2.4   | 11  | AA     | 84IMA 02  |
| 116.2            |       | 11  | AA     | 84IMA 02  | 108.9            |       | 11  | AA     | 84IMA 02  |
| 117.3            | 10.3  | 11  | AA     | 84IMA 02  | 114.2            |       | 11  | AA     | 84IMA 02  |
| 117.6            |       | 11  | AA     | 84IMA 02  | 126              | 0.5   | 11  | AA     | 84IMA 02  |
| 117.7            | 27.9  | 11  | AA     | 84IMA 02  | 129.2            | 2.7   | 11  | AA     | 84IMA 02  |
| 118.6            |       | 11  | AA     | 84IMA 02  | 129.4            | 7.2   | 11  | AA     | 84IMA 02  |
| 120.7            |       | 11  | AA     | 84IMA 02  | 131              |       | 11  | XRF    | 83PEL 01  |
| 121.3            |       | 11  | AA     | 84IMA 02  | 136.1            | 4.1   | 11  | AA     | 84IMA 02  |
| 122.2            | 3.3   | 11  | AA     | 84IMA 02  | 136.6            | 2.2   | 11  | AA     | 84IMA 02  |
| 123              |       | 11  | AA     | 84IMA 02  | 137.2            |       | 11  | AA     | 84IMA 02  |
| 124.1            | 8.4   | 11  | AA     | 84IMA 02  | 141              | 5     |     | RTNA   | 84BYR 02  |
| 124.1            | 9.1   | 11  | AA     | 84IMA 02  | 142.9            |       | 11  | AA     | 84IMA 02  |
| 124.1            | 9.2   | 11  | AA     | 84IMA 02  | 149.1            | 4.9   | 11  | AA     | 84IMA 02  |
| 124.7            |       | 11  | AA     | 84IMA 02  | 149.9            | 4.2   | 11  | AA     | 84IMA 02  |
| 124.9            |       | 11  | AA     | 84IMA 02  | 151.4            | 12.7  | 11  | AA     | 84IMA 02  |
| 125              | 0.2   | 11  | AA     | 84IMA 02  | 153.6            |       | 11  | AA     | 84IMA 02  |
| 126.5            | 9.1   | 11  | AA     | 84IMA 02  | 153.6            | 8.3   | 11  | AA     | 84IMA 02  |
| 126.5            | 9.1   | 11  | AA     | 84IMA 02  | 154.8            |       | 11  | AA     | 84IMA 02  |
| 127              | 9     |     | CPXRF  | 85SIM 01  | 156              | 4     |     | AA     | 85SAL 01  |
| 127.6            | 12    | 11  | AA     | 84IMA 02  | 157.6            | 1.2   | 11  | AA     | 84IMA 02  |
| 129.3            | 1.4   | 11  | AA     | 84IMA 02  | 159              |       | 11  | XRF    | 83PEL 01  |
| 129.7            | 13.2  | 11  | AA     | 84IMA 02  | 159              | 6     |     | ITNA   | 84GLA 11  |
| 145              | 3     |     | ICPMS  | 86SCI 01  | 159.1            |       | 11  | AA     | 84IMA 02  |
| 160              | 60    |     | ITNA   | 84GLA 11  | 159.1            | 5.5   | 11  | AA     | 84IMA 02  |
|                  |       |     |        |           | 160              | 0.6   |     | ICPMS  | 86SCI 01  |
|                  |       |     |        |           | 160.4            |       | 11  | AA     | 84IMA 02  |
|                  |       |     |        |           | 160.7            | 9.3   | 11  | AA     | 84IMA 02  |

TABLE 1577A-2: INDIVIDUAL DATA FOR NBS SRM 1577A (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Cu (ug/g) cont.</u> |       |     |        |           | <u>K (%)</u>     |       |     |        |           |
| 162.7                  | 6.5   | 11  | AA     | 84IMA 02  | 0.894            | 0.03  |     | ICPMS  | 86SCI 01  |
| 162.7                  | 6.5   | 11  | AA     | 84IMA 02  | 0.95             | 0.02  |     | ITNA   | 84GLA 11  |
| 163.1                  | 3.2   | 11  | AA     | 84IMA 02  | 1.15             | 0.17  |     | ITNA   | 86KRA 01  |
| 163.6                  |       | 11  | AA     | 84IMA 02  |                  |       |     |        |           |
| 164                    | 10    |     | ITNA   | 86KRA 01  |                  |       |     |        |           |
| <u>Fe (ug/g)</u>       |       |     |        |           | <u>Mg (ug/g)</u> |       |     |        |           |
|                        |       |     |        |           | 571              | 57    |     | ITNA   | 86KRA 01  |
|                        |       |     |        |           | 624              | 2     |     | ICPMS  | 86SCI 01  |
|                        |       |     |        |           | 640              | 30    |     | ITNA   | 84GLA 11  |
|                        |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 67.2                   | 9.2   | 11  | AA     | 84IMA 02  | 8.4              |       | 11  | AA     | 84IMA 02  |
| 82.1                   | 3.8   | 11  | AA     | 84IMA 02  | 9.1              |       | 11  | AA     | 84IMA 02  |
| 95.8                   |       | 11  | AA     | 84IMA 02  | 9.1              | 0.08  |     | ICPMS  | 86SCI 01  |
| 105.9                  |       | 11  | AA     | 84IMA 02  | 9.1              | 0.4   |     | RTNA   | 84BYR 02  |
| 116.1                  |       | 11  | AA     | 84IMA 02  | 9.1              | 0.8   | 11  | AA     | 84IMA 02  |
| 119.8                  | 1.6   | 11  | AA     | 84IMA 02  | 9.4              |       | 11  | AA     | 84IMA 02  |
| 135.1                  |       | 11  | AA     | 84IMA 02  | 9.5              |       | 11  | AA     | 84IMA 02  |
| 136.9                  | 8.6   | 11  | AA     | 84IMA 02  | 9.5              | 0.6   | 11  | AA     | 84IMA 02  |
| 140                    |       | 11  | AA     | 84IMA 02  | 9.5              | 0.6   | 11  | AA     | 84IMA 02  |
| 147                    |       | 11  | AA     | 84IMA 02  | 9.58             | 0.38  | 6   | FAA    | 85DOU 01  |
| 147.8                  | 7.4   | 11  | AA     | 84IMA 02  | 9.7              |       | 11  | AA     | 84IMA 02  |
| 148.3                  | 3.5   | 11  | AA     | 84IMA 02  | 9.7              | 0.2   | 11  | AA     | 84IMA 02  |
| 149                    |       | 11  | XRF    | 83PEL 01  | 9.7              | 0.3   | 11  | AA     | 84IMA 02  |
| 149.7                  | 10.8  | 11  | AA     | 84IMA 02  | 9.7              |       | 11  | AA     | 84IMA 02  |
| 155.8                  |       | 11  | AA     | 84IMA 02  | 9.7              | 0.2   | 11  | AA     | 84IMA 02  |
| 155.9                  | 5.4   | 11  | AA     | 84IMA 02  | 9.7              | 0.3   | 11  | AA     | 84IMA 02  |
| 156.2                  | 5.7   | 11  | AA     | 84IMA 02  | 9.7              |       | 11  | AA     | 84IMA 02  |
| 156.7                  | 5.4   | 11  | AA     | 84IMA 02  | 9.8              |       | 11  | AA     | 84IMA 02  |
| 160.2                  | 9.4   | 11  | AA     | 84IMA 02  | 9.8              |       | 11  | AA     | 84IMA 02  |
| 162.6                  |       | 11  | AA     | 84IMA 02  | 9.8              |       | 11  | AA     | 84IMA 02  |
| 164.1                  | 6.7   | 11  | AA     | 84IMA 02  | 9.8              |       | 11  | AA     | 84IMA 02  |
| 168.2                  |       | 11  | AA     | 84IMA 02  | 9.8              | 0.4   |     | ITNA   | 86KRA 01  |
| 168.3                  | 4.4   | 11  | AA     | 84IMA 02  | 9.8              | 0.4   | 11  | AA     | 84IMA 02  |
| 170.9                  |       | 11  | AA     | 84IMA 02  | 9.9              | 0.3   | 11  | AA     | 84IMA 02  |
| 170.9                  | 9.8   | 11  | AA     | 84IMA 02  | 9.9              | 0.3   | 11  | AA     | 84IMA 02  |
| 170.9                  | 9.8   | 11  | AA     | 84IMA 02  | 9.9              | 0.4   | 11  | AA     | 84IMA 02  |
| 172.4                  |       | 11  | AA     | 84IMA 02  | 10.1             | 0.1   | 11  | AA     | 84IMA 02  |
| 178                    |       | 11  | XRF    | 83PEL 01  | 10.1             | 0.3   | 11  | AA     | 84IMA 02  |
| 181                    | 28    |     | ITNA   | 86KRA 01  | 10.1             | 0.7   | 11  | AA     | 84IMA 02  |
| 202                    | 2     |     | ICPMS  | 86SCI 01  | 10.2             | 0.1   | 11  | AA     | 84IMA 02  |
| 204.1                  | 49    | 11  | AA     | 84IMA 02  | 10.2             | 0.7   | 6   | FAA    | 85DOU 01  |
|                        |       |     |        |           | 10.3             |       | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 10.3             | 0.5   |     | ITNA   | 84GLA 11  |
|                        |       |     |        |           | 10.3             | 1     | 6   | FAA    | 85DOU 01  |
|                        |       |     |        |           | 10.4             | 0.6   | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 10.5             |       | 11  | XRF    | 83PEL 01  |
|                        |       |     |        |           | 10.5             |       | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 10.7             | 0.2   | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 10.8             | 0.4   | 11  | AA     | 84IMA 02  |
| <u>Hg (ng/g)</u>       |       |     |        |           |                  |       |     |        |           |
| <                      | 10    |     | CVAA   | 85SAL 01  |                  |       |     |        |           |
| 3                      | 0.2   |     | RTNA   | 84DEL 01  |                  |       |     |        |           |
| 3.3                    | 0.5   |     | RTNA   | 84BYR 02  |                  |       |     |        |           |
| <u>I (ng/g)</u>        |       |     |        |           |                  |       |     |        |           |
| <                      | 400   |     | ITNA   | 84GLA 11  |                  |       |     |        |           |
| 240                    | 30    |     | IENA   | 84GLA 11  |                  |       |     |        |           |
| 246                    | 11    |     | RTNA   | 84BYR 02  |                  |       |     |        |           |

TABLE 1577A-2: INDIVIDUAL DATA FOR NBS SRM 1577A (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mo (ug/g)</u>       |       |     |        |           | <u>Se (ng/g)</u> |       |     |        |           |
| 3.4                    | 1.2   |     | ITNA   | 86KRA 01  | 580              | 90    |     | RTNA   | 84BYR 02  |
| 3.47                   | 0.01  |     | RTNA   | 84BYR 02  | 650              | 40    |     | HAA    | 85SAL 01  |
| <u>Na (ug/g)</u>       |       |     |        |           | 779              | 34    |     | CPXRF  | 84BUS 01  |
| 2170                   | 70    |     | ICPMS  | 86SCI 01  | 790              | 180   |     | ITNA   | 86KRA 01  |
| 2450                   | 30    |     | ITNA   | 86KRA 01  | 1100             | 100   |     | HAA    | 85CUT 01  |
| 2600                   | 200   |     | ITNA   | 84GLA 11  | <u>U (ng/g)</u>  |       |     |        |           |
| <u>P (%)</u>           |       |     |        |           | <                | 1     |     | DNA    | 86GAU 01  |
| 1.18                   | 0.005 |     | ICPMS  | 86SCI 01  | 0.704            | 0.012 |     | IDMS   | 83KEL 01  |
| <u>Pb (ng/g)</u>       |       |     |        |           | <u>V (ng/g)</u>  |       |     |        |           |
| 150                    |       | 6   | DCPES  | 84SNE 01  | 96               | 4     |     | RTNA   | 84BYR 02  |
| 150                    | 10    |     | FAA    | 85SAL 01  | 98.7             | 1.6   |     | IDMS   | 85FAS 02  |
| 160                    |       | 6   | DCPES  | 84SNE 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| 210                    |       | 6   | DCPES  | 84SNE 01  | 109.6            |       | 11  | AA     | 84IMA 02  |
| <u>Rb (ug/g)</u>       |       |     |        |           | 109.6            |       | 11  | AA     | 84IMA 02  |
| 12.2                   | 0.7   |     | ITNA   | 86KRA 01  | 111.6            |       | 11  | AA     | 84IMA 02  |
| <u>S (ug/g)</u>        |       |     |        |           | 115.4            | 8.1   | 11  | AA     | 84IMA 02  |
| 7845                   | 46    |     | IDMS   | 84KEL 01  | 116.4            |       | 11  | AA     | 84IMA 02  |
| 7900                   | 200   |     | ICPMS  | 86SCI 01  | 117              | 4.4   | 11  | AA     | 84IMA 02  |
| 8550                   | 70    |     | CB     | 86BOW 01  | 117.9            |       | 11  | AA     | 84IMA 02  |
| 8860                   | 170   |     | WXRF   | 86BOW 01  | 118              |       | 11  | AA     | 84IMA 02  |
| <u>S-32/34 (ratio)</u> |       |     |        |           | 119              | 3.3   | 11  | AA     | 84IMA 02  |
| 22.555                 |       |     | IDMS   | 84KEL 01  | 120              | 5.2   | 11  | AA     | 84IMA 02  |
| <u>S-33/34 (ratio)</u> |       |     |        |           | 120.9            |       | 11  | AA     | 84IMA 02  |
| 0.1776                 |       |     | IDMS   | 84KEL 01  | 122              | 2     |     | AA     | 85SAL 01  |
| <u>Sb (ng/g)</u>       |       |     |        |           | 122.8            | 6     | 11  | AA     | 84IMA 02  |
| 31                     | 1     |     | RTNA   | 84BYR 02  | 122.8            | 6     | 11  | AA     | 84IMA 02  |
| <u>Sc (ng/g)</u>       |       |     |        |           | 122.8            | 10.9  | 11  | AA     | 84IMA 02  |
| 0.8                    |       |     | ITNA   | 84GLA 11  | 122.9            |       | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 123.9            | 1.3   | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 124.1            | 1.7   | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 124.5            | 2.3   | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 125.3            | 2.2   | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 125.5            | 3.5   | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 126              |       | 11  | XRF    | 83PEL 01  |
|                        |       |     |        |           | 126.1            |       | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 126.4            | 2.6   | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 126.8            | 1.5   | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 126.9            | 9.7   | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 127              | 3     |     | ITNA   | 86KRA 01  |
|                        |       |     |        |           | 127.5            |       | 11  | AA     | 84IMA 02  |
|                        |       |     |        |           | 130.1            | 2.1   | 11  | AA     | 84IMA 02  |

TABLE 1580-1: COMPILED DATA FOR NBS SRM 1580 ORGANICS IN SHALE OIL (revised 3/1/86)

| COMPOUND              | CAS #   | UNITS | NBS<br>Mean $\pm$ SD |
|-----------------------|---------|-------|----------------------|
| Benzo[a]pyrene        | 50328   | ug/g  | 21 $\pm$ 6           |
| Benzo[e]pyrene        | 192972  | ug/g  | 18 $\pm$ 8           |
| Benzo[f]quinoline     | 85029   | ug/g  | 16 $\pm$ 4           |
| m-Cresol              | 108394  | ug/g  | 330                  |
| o-Cresol              | 95487   | ug/g  | 385 $\pm$ 50         |
| p-Cresol              | 106445  | ug/g  | 270                  |
| 2,4-Dimethylphenol    | 105679  | ug/g  | 380                  |
| 2,5-Dimethylphenol    | 95874   | ug/g  | 320                  |
| 2,6-Dimethylphenol    | 576261  | ug/g  | 175 $\pm$ 30         |
| Fluoranthene          | 206440  | ug/g  | 54 $\pm$ 10          |
| Perylene              | 198550  | ug/g  | 3.4 $\pm$ 2.2        |
| Phenanthridine        | 229878  | ug/g  | 45                   |
| Phenol                | 108952  | ug/g  | 407 $\pm$ 50         |
| Pyrene                | 129000  | ug/g  | 104 $\pm$ 18         |
| 2,5,6-Trimethylphenol | 2416946 | ug/g  | 360                  |
| 2,4,6-Trimethylphenol | 527606  | ug/g  | 120                  |

TABLE 1581-1: COMPILED DATA FOR NBS SRM 1581 POLYCHLORINATED BIPHENYLS IN OILS (revised 3/1/86)

| COMPOUND                        | CAS #    | UNITS | NBS<br>Mean $\pm$ SD |
|---------------------------------|----------|-------|----------------------|
| Aroclor 1242 in Motor Oil       | 53469219 | ug/g  | 100 $\pm$ 1          |
| Aroclor 1260 in Motor Oil       | 11096825 | ug/g  | 100 $\pm$ 2          |
| Aroclor 1242 in Transformer Oil | 53469219 | ug/g  | 100 $\pm$ 1          |
| Aroclor 1260 in Transformer Oil | 11096825 | ug/g  | 100 $\pm$ 3          |

TABLE 1583-1: COMPILED DATA FOR NBS SRM 1583 CHLORINATED PESTICIDES IN 2,2,4-TRIMETHYLPENTANE (revised 3/1/86)

| COMPOUND           | CAS #   | UNITS | NBS<br>Mean $\pm$ SD |
|--------------------|---------|-------|----------------------|
| gamma-BHC          | 58899   | ug/g  | 1.11 $\pm$ 0.01      |
| delta-BHC          | 319868  | ug/g  | 0.76 $\pm$ 0.01      |
| Aldrin             | 309002  | ug/g  | 0.86 $\pm$ 0.01      |
| p,p'-DDE           | 72559   | ug/g  | 1.23 $\pm$ 0.03      |
| p,p'-DDT           | 50293   | ug/g  | 1.90 $\pm$ 0.10      |
| Heptachlor Epoxide | 1024573 | ug/g  | 1.0                  |

TABLE 1582-1: COMPILED DATA FOR NBS SRM 1582 PETROLEUM CRUDE OIL (revised 3/1/86)

| COMPOUND               | CAS #  | UNITS | NBS       | CONSENSUS       | MEDIAN | RANGE      | METHOD MEANS    |
|------------------------|--------|-------|-----------|-----------------|--------|------------|-----------------|
|                        |        |       | Mean ± SD | Mean ± SD (n)   |        |            | Mean (n) Method |
| Benz [a]anthracene     | 56553  | ug/g  | 3.0 ± 0.3 | ---             | ---    | ---        | ---             |
| Benzo[ghi]perylene     | 191242 | ug/g  | ---       | 1.7 (1)         | ---    | ---        | 1.7 (1) GC-MS   |
|                        | 192242 | ug/g  | 1.7       | ---             | ---    | ---        | ---             |
| Benzo[a]pyrene         | 50328  | ug/g  | 1.1 ± 0.3 | 1.08 ± 0.12 (3) | 1.1    | 0.95 - 1.2 | 1.2 (1) HPLC    |
|                        | 50328  | ug/g  | ---       | ---             | ---    | ---        | 1.02 (2) GC-MS  |
| Benzo[e]pyrene         | 192972 | ug/g  | 3.5       | ---             | ---    | ---        | ---             |
| Carbazole              | 86748  | ug/g  | 3.4       | ---             | ---    | ---        | ---             |
| o-Cresol               | 95487  | ng/g  | 500       | ---             | ---    | ---        | ---             |
| Dibenzothiophene       | 132650 | ug/g  | 33 ± 2    | ---             | ---    | ---        | ---             |
| Fluoranthene           | 206440 | ug/g  | 2.5 ± 0.3 | ---             | ---    | ---        | ---             |
| Indeno[1,2,3-cd]pyrene | 193395 | ng/g  | 170       | 170 (1)         | ---    | ---        | 170 (1) GC-MS   |
| Perylene               | 198550 | ug/g  | 31 ± 3    | 30.9 ± 1.4 (3)  | 30.2   | 30 - 32.6  | 30.1 (2) GC-MS  |
|                        | 198550 | ug/g  | ---       | ---             | ---    | ---        | 32.6 (1) HPLC   |
| Phenanthrene           | 85018  | ug/g  | 101 ± 5   | ---             | ---    | ---        | ---             |
| Phenol                 | 108952 | ng/g  | 300       | ---             | ---    | ---        | ---             |
| Pyrene                 | 129000 | ug/g  | 7         | ---             | ---    | ---        | ---             |

TABLE 1582-2: INDIVIDUAL DATA FOR NBS SRM 1582 (revised 3/1/86)

| Conc                                 | Uncer | Com | Method | Reference |
|--------------------------------------|-------|-----|--------|-----------|
| <u>Benzo[ghi]perylene (ug/g)</u>     |       |     |        |           |
| 1.7                                  | 0.1   |     | GC-MS  | 84HIL 01  |
| <u>Benzo[a]pyrene (ug/g)</u>         |       |     |        |           |
| 0.95                                 | 0.05  |     | GC-MS  | 84HIL 01  |
| 1.1                                  | 0.23  |     | GC-MS  | 84HIL 01  |
| 1.2                                  | 0.1   |     | HPLC   | 84HIL 01  |
| <u>Indeno[1,2,3-cd]pyrene (ng/g)</u> |       |     |        |           |
| 170                                  | 40    |     | GC-MS  | 84HIL 01  |
| <u>Perylene (ug/g)</u>               |       |     |        |           |
| 30                                   | 1.1   |     | GC-MS  | 84HIL 01  |
| 30.2                                 | 1.7   |     | GC-MS  | 84HIL 01  |
| 32.6                                 | 1.2   |     | HPLC   | 84HIL 01  |

TABLE 1584-1: COMPILED DATA FOR NBS SRM 1584 PRIORITY POLLUTANT PHENOLS IN METHANOL  
(revised 3/1/86)

| COMPOUND              | CAS #   | UNITS | NBS            | CONSENSUS | METHOD |
|-----------------------|---------|-------|----------------|-----------|--------|
|                       |         |       | Mean $\pm$ SD  | Mean (n)  |        |
| 4-Chloro-m-cresol     | 59507   | ug/mL | 27.4 $\pm$ 0.4 | ---       |        |
| 2-Chlorophenol        | 95578   | ug/mL | 64.4 $\pm$ 1.4 | ---       |        |
| o-Cresol              | 108394  | ug/mL | ---            | < 1       | GC     |
| 2,4-Dichlorophenol    | 120832  | ug/mL | 35.6 $\pm$ 1.3 | ---       |        |
| 2,3-Dimethylphenol    | 526750  | ug/mL | ---            | < 1       | GC     |
| 2,4-Dimethylphenol    | 105679  | ug/mL | 51.6 $\pm$ 0.2 | 48.6 (1)  | GC     |
| 2,6-Dimethylphenol    | 576261  | ug/mL | ---            | < 1       | GC     |
| 3,4-Dimethylphenol    | 95658   | ug/mL | ---            | < 1       | GC     |
| 4,6-Dinitro-o-cresol  | 534521  | ug/mL | 20.1 $\pm$ 0.9 | ---       |        |
| 2,4-Dinitrophenol     | 51285   | ug/mL | 22.4           | ---       |        |
| m-Ethylphenol         | 620177  | ug/mL | ---            | < 1       | GC     |
| o-Ethylphenol         | 90006   | ug/mL | ---            | < 1       | GC     |
| p-Ethylphenol         | 1230709 | ug/mL | ---            | < 1       | GC     |
| 2-Methylphenol        | 95487   | ug/mL | ---            | < 1       | GC     |
| 2-Nitrophenol         | 88755   | ug/mL | 25.2 $\pm$ 0.7 | ---       |        |
| 4-Nitrophenol         | 100027  | ug/mL | 20.7 $\pm$ 0.7 | ---       |        |
| Pentachlorophenol     | 87865   | ug/mL | 15.4 $\pm$ 1.1 | ---       |        |
| Phenol                | 108952  | ug/mL | 29.7 $\pm$ 0.9 | 27.2 (1)  | GC     |
| 2,4,6-Trichlorophenol | 88062   | ug/mL | 20.4 $\pm$ 1.9 | ---       |        |

TABLE 1584-2: INDIVIDUAL DATA FOR NBS SRM 1584 (revised 3/1/86)

| Conc                              | Uncer | Com | Method | Reference | Conc                          | Uncer | Com | Method | Reference |
|-----------------------------------|-------|-----|--------|-----------|-------------------------------|-------|-----|--------|-----------|
| <u>o-Cresol (ug/mL)</u>           |       |     |        |           | <u>m-Ethylphenol (ug/mL)</u>  |       |     |        |           |
| <                                 | 1     |     | GC     | 85GAU 04  | <                             | 1     |     | GC     | 85GAU 04  |
| <u>2,3-Dimethylphenol (ug/mL)</u> |       |     |        |           | <u>o-Ethylphenol (ug/mL)</u>  |       |     |        |           |
| <                                 | 1     |     | GC     | 85GAU 04  | <                             | 1     |     | GC     | 85GAU 04  |
| <u>2,4-Dimethylphenol (ug/mL)</u> |       |     |        |           | <u>p-Ethylphenol (ug/mL)</u>  |       |     |        |           |
| 48.6                              |       |     | GC     | 85GAU 04  | <                             | 1     |     | GC     | 85GAU 04  |
| <u>2,6-Dimethylphenol (ug/mL)</u> |       |     |        |           | <u>2-Methylphenol (ug/mL)</u> |       |     |        |           |
| <                                 | 1     |     | GC     | 85GAU 04  | <                             | 1     |     | GC     | 85GAU 04  |
| <u>3,4-Dimethylphenol (ug/mL)</u> |       |     |        |           | <u>Phenol (ug/mL)</u>         |       |     |        |           |
| <                                 | 1     |     | GC     | 85GAU 04  | 27.2                          |       |     | GC     | 85GAU 04  |

TABLE 1585-1: COMPILED DATA FOR NBS SRM 1585 CHLORINATED BIPHENYLS IN ISOCTANE  
(revised 3/1/86)

| COMPOUND                          | CAS #    | UNITS | NBS    |      |
|-----------------------------------|----------|-------|--------|------|
|                                   |          |       | Mean ± | SD   |
| 4-Chlorobiphenyl                  | 2051629  | ug/g  | 43.3 ± | 1.0  |
| 4,4'-Dichlorobiphenyl             | 2050682  | ug/g  | 9.53 ± | 0.08 |
| 2,4,4'-Trichlorobiphenyl          | 7012375  | ug/g  | 3.70 ± | 0.02 |
| 2,2',5,5'-Tetrachlorobiphenyl     | 35693993 | ug/g  | 7.72 ± | 0.06 |
| 3,3',4,4'-Tetrachlorobiphenyl     | 32598133 | ug/g  | 6.62 ± | 0.05 |
| 2,2',4,5,5'-Pentachlorobiphenyl   | 37680732 | ug/g  | 5.24 ± | 0.02 |
| 2,2',3,4,4',5'-Hexachlorobiphenyl | 35065282 | ug/g  | 2.37 ± | 0.02 |
| 2,2',4,4',5,5'-Hexachlorobiphenyl | 35065271 | ug/g  | 3.06 ± | 0.02 |

TABLE 1587-1: COMPILED DATA FOR NBS SRM 1587 NITRATED POLYCYCLIC AROMATIC HYDROCARBONS IN METHANOL  
(revised 3/1/86)

| COMPOUND                   | CAS #    | UNITS | NBS    |      |
|----------------------------|----------|-------|--------|------|
|                            |          |       | Mean ± | SD   |
| 2-Nitrofluorene            | 607578   | ug/g  | 9.67 ± | 0.39 |
| 9-Nitroanthracene          | 602608   | ug/g  | 5.01 ± | 0.11 |
| 3-Nitrofluoranthene        | 829217   | ug/g  | 9.24 ± | 0.06 |
| 1-Nitropyrene              | 5522430  | ug/g  | 8.95 ± | 0.28 |
| 7-Nitrobenz [a] anthracene | 20268513 | ug/g  | 9.27 ± | 0.23 |
| 6-Nitrochrysene            | 7496028  | ug/g  | 8.13 ± | 0.11 |
| 6-Nitrobenzo [a] pyrene    | 63041907 | ug/g  | 6.1    |      |

TABLE 1589-1: COMPILED DATA FOR NBS SRM 1589 POLYCHLORINATED BIPHENYLS IN HUMAN SERUM  
(revised 3/1/86)

| COMPOUND                            | CAS #    | UNITS | NBS     |     |
|-------------------------------------|----------|-------|---------|-----|
|                                     |          |       | Mean +  | SD  |
| Aroclor 1260                        | 11096825 | ng/g  | 106.0 ± | 1.3 |
| 1,2,3,4-Tetrachlorodibenzo-p-dioxin | 30746588 | ng/g  | 0.153   |     |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 1746016  | ng/g  | 0.081   |     |

TABLE 1590-1: COMPILED DATA FOR NBS SRM 1590 STABILIZED WINE (revised 3/1/86)

| ELEMENT        | UNITS | NBS     |      | CONSENSUS<br>Mean (n) | METHOD |
|----------------|-------|---------|------|-----------------------|--------|
|                |       | Mean ±  | SD   |                       |        |
| As             | ug/L  | ---     |      | 5.8 (1)               | NAA    |
| Cu             | ug/L  | 300     |      | 270 (1)               | NAA    |
| Fe             | mg/L  | 6       |      | ---                   |        |
| K              | mg/L  | 320     |      | ---                   |        |
| Mn             | ug/L  | ---     |      | 423 (1)               | NAA    |
| Na             | mg/L  | 95      |      | ---                   |        |
| Zn             | ug/L  | ---     |      | 197 (1)               | NAA    |
| Volatile Acidy | g/L   | 0.24    |      | ---                   |        |
| Ethanol        | %     | 18.51 ± | 0.16 | ---                   |        |

TABLE 1590-2: INDIVIDUAL DATA FOR NBS SRM 1590 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>As (ug/L)</u> |       |     |        |           | <u>Mn (ug/L)</u> |       |     |        |           |
| 5.8              |       |     | RTNA   | 84BYR 02  | 423              | 11    |     | RTNA   | 84BYR 02  |
| <u>Cu (ug/L)</u> |       |     |        |           | <u>Zn (ug/L)</u> |       |     |        |           |
| 270              | 14    |     | RTNA   | 84BYR 02  | 197              | 14    |     | RTNA   | 84BYR 02  |

TABLE 1614-1: COMPILED DATA FOR NBS SRM 1614 DIOXIN IN ISOCTANE (revised 3/1/86)

| COMPOUND                                  | CAS #    | UNITS | NBS<br>Mean |
|---|----------|-------|-------------|
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin       | 1746016  | ng/g  | 98.3        |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin, C-13 | 76523405 | ng/g  | 95.6        |

TABLE 1639-1: COMPILED DATA FOR NBS SRM 1639 HALOCARBONS IN METHANOL (revised 3/1/86)

| COMPOUND             | CAS #  | UNITS | NBS<br>Mean |
|----------------------|--------|-------|-------------|
| Chloroform           | 67663  | ng/uL | 6235        |
| Chlorodibromomethane | 124481 | ng/uL | 124.6       |
| Bromodichloromethane | 74975  | ng/uL | 389.9       |
| Bromoform            | 75252  | ng/uL | 86.5        |
| Carbon Tetrachloride | 56235  | ng/uL | 157.0       |
| Trichloroethylene    | 79016  | ng/uL | 85.8        |
| Tetrachloroethylene  | 127184 | ng/uL | 40.6        |

TABLE 1618-1: COMPILED DATA FOR NBS SRM 1618 VANADIUM AND NICKEL IN RESIDUAL FUEL OIL  
(revised 3/1/86)

| ELEMENT | UNITS | NBS   |       |
|---------|-------|-------|-------|
|         |       | Mean  | ± SD  |
| ASH     | %     | 0.083 |       |
| Ni      | ug/g  | 75.2  | ± 0.4 |
| S       | %     | 4.3   |       |
| V       | ug/g  | 423.1 | ± 3.4 |

TABLE 1619-1: COMPILED DATA FOR NBS SRM 1619 SULFUR IN RESIDUAL FUEL OIL  
(revised 3/1/86)

| ELEMENT | UNITS             | NBS       |      | CONSENSUS | METHOD |
|---------|-------------------|-----------|------|-----------|--------|
|         |                   | Mean      | ± SD |           |        |
| Al      | ug/g              | 4.3       |      | ---       | ---    |
| Al      | ug/mL             | 4         |      | ---       | ---    |
| As      | ng/g              | ---       |      | 94 (1)    | NAA    |
| B       | ug/g              | < 1.1     |      | ---       | ---    |
| B       | ug/mL             | < 1       |      | ---       | ---    |
| Br      | ng/g              | ---       |      | 700 (1)   | NAA    |
| Ca      | ug/g              | 10.6      |      | ---       | ---    |
| Ca      | ug/mL             | 10        |      | ---       | ---    |
| Cl      | ug/g              | ---       |      | 20 (1)    | NAA    |
| Co      | ng/g              | ---       |      | 350 (1)   | NAA    |
| Cr      | ng/g              | < 1100    |      | 380 (1)   | NAA    |
| Cr      | ug/mL             | < 1       |      | ---       | ---    |
| Cu      | ug/g              | < 1.1     |      | ---       | ---    |
| Cu      | ug/mL             | < 1       |      | ---       | ---    |
| Density | g/cm <sup>3</sup> | 0.939     |      | ---       | ---    |
| Eu      | ug/g              | ---       |      | 10.2 (1)  | NAA    |
| Fe      | ug/g              | < 5.3     |      | 23 (1)    | NAA    |
| Fe      | ug/mL             | < 5       |      | ---       | ---    |
| La      | ng/g              | ---       |      | 37 (1)    | NAA    |
| Mg      | ug/g              | 1.1       |      | ---       | ---    |
| Mg      | ug/mL             | 1         |      | ---       | ---    |
| Mn      | ug/g              | < 1.1     |      | ---       | ---    |
| Mn      | ug/mL             | < 1       |      | ---       | ---    |
| Mo      | ug/g              | < 1.1     |      | ---       | ---    |
| Mo      | ug/mL             | < 1       |      | ---       | ---    |
| Na      | ug/g              | 18        |      | 27 (1)    | NAA    |
| Na      | ug/mL             | 17        |      | ---       | ---    |
| Ni      | ug/g              | 9.6       |      | 12 (1)    | NAA    |
| Ni      | ug/mL             | 9         |      | ---       | ---    |
| S       | ug/g              | 7190 ± 70 |      | 7215 (2)  | NM     |
| Sb      | ng/g              | ---       |      | 30 (1)    | NAA    |
| Sc      | ug/g              | ---       |      | 1.39 (1)  | NAA    |
| Se      | ng/g              | ---       |      | 95 (1)    | NAA    |
| Si      | ug/g              | 2.2       |      | ---       | ---    |
| Si      | ug/mL             | 2         |      | ---       | ---    |
| Sm      | ug/g              | ---       |      | 2.45 (1)  | NAA    |
| Sn      | ug/g              | < 1.1     |      | ---       | ---    |
| Sn      | ug/mL             | < 1       |      | ---       | ---    |
| Ti      | ug/g              | < 1.1     |      | ---       | ---    |
| Ti      | ug/mL             | < 1       |      | ---       | ---    |
| V       | ug/g              | 37        |      | 42.6 (1)  | NAA    |
| V       | ug/mL             | 35        |      | ---       | ---    |
| Zn      | ug/g              | 4.3       |      | 1.27 (1)  | NAA    |
| Zn      | ug/mL             | 4         |      | ---       | ---    |

TABLE 1619-2: INDIVIDUAL DATA FOR NBS SRM 1619 (revised 3/1/86)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> | <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|------------------|--------------|------------|---------------|------------------|
| <u>As (ng/g)</u> |              |            |               |                  | <u>Ni (ug/g)</u> |              |            |               |                  |
| 94               | 10           |            | ITNA          | 85FIL 02         | 12               | 1.1          |            | ITNA          | 85FIL 02         |
| <u>Br (ng/g)</u> |              |            |               |                  | <u>S (ug/g)</u>  |              |            |               |                  |
| 700              | 900          |            | ITNA          | 85FIL 02         | 7130             | 110          | 7          | NM            | 83LI 01          |
| <u>Cl (ug/g)</u> |              |            |               |                  | 7300             | 180          | 7          | NM            | 83LI 01          |
| 20               | 1.8          |            | ITNA          | 83LI 01          | <u>Sb (ng/g)</u> |              |            |               |                  |
| <u>Co (ng/g)</u> |              |            |               |                  | 30               | 20           |            | ITNA          | 85FIL 02         |
| 350              | 40           |            | ITNA          | 85FIL 02         | <u>Sc (ug/g)</u> |              |            |               |                  |
| <u>Cr (ng/g)</u> |              |            |               |                  | 1.39             | 0.67         |            | ITNA          | 85FIL 02         |
| 380              | 110          |            | ITNA          | 85FIL 02         | <u>Se (ng/g)</u> |              |            |               |                  |
| <u>Eu (ug/g)</u> |              |            |               |                  | 95               | 27           |            | ITNA          | 85FIL 02         |
| 10.2             | 2.4          |            | ITNA          | 85FIL 02         | <u>Sm (ug/g)</u> |              |            |               |                  |
| <u>Fe (ug/g)</u> |              |            |               |                  | 2.45             | 0.47         |            | ITNA          | 85FIL 02         |
| 23               | 16           |            | ITNA          | 85FIL 02         | <u>V (ug/g)</u>  |              |            |               |                  |
| <u>La (ng/g)</u> |              |            |               |                  | 42.6             | 4.7          |            | ITNA          | 85FIL 02         |
| 37               | 6            |            | ITNA          | 85FIL 02         | <u>Zn (ug/g)</u> |              |            |               |                  |
| <u>Na (ug/g)</u> |              |            |               |                  | 1.27             | 0.35         |            | ITNA          | 85FIL 02         |
| 27               | 6            |            | ITNA          | 85FIL 02         |                  |              |            |               |                  |

TABLE 1620-1: COMPILED DATA FOR NBS SRM 1620 SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean $\pm$ SD |
|---------|-------|----------------------|
| S       | %     | 4.48 $\pm$ 0.02      |

TABLE 1620A-1: COMPILED DATA FOR NBS SRM 1620A SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT   | UNITS             | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean $\pm$ SD (n) | MEDIAN | RANGE       | METHOD MEANS |     |        |
|-----------|-------------------|----------------------|--------------------------------|--------|-------------|--------------|-----|--------|
|           |                   |                      |                                |        |             | Mean         | (n) | Method |
| Al        | ug/g              | 18                   | ---                            | ---    | ---         | ---          |     |        |
| Al        | ug/mL             | 20                   | ---                            | ---    | ---         | ---          |     |        |
| As        | ng/g              | ---                  | 40 (1)                         | ---    | ---         | 40           | (1) | NAA    |
| B         | ug/g              | < 0.9                | ---                            | ---    | ---         | ---          |     |        |
| B         | ug/mL             | < 1                  | ---                            | ---    | ---         | ---          |     |        |
| Br        | ng/g              | ---                  | 600 (1)                        | ---    | ---         | 600          | (1) | NAA    |
| Ca        | ug/g              | 8.2                  | ---                            | ---    | ---         | ---          |     |        |
| Ca        | ug/mL             | 9                    | ---                            | ---    | ---         | ---          |     |        |
| Cl        | ug/g              | ---                  | 11.8 (1)                       | ---    | ---         | 11.8         | (1) | NAA    |
| Co        | ng/g              | ---                  | 80 (1)                         | ---    | ---         | 80           | (1) | NAA    |
| Cr        | ng/g              | < 900                | 200 (1)                        | ---    | ---         | 200          | (1) | NAA    |
| Cr        | ug/mL             | < 1                  | ---                            | ---    | ---         | ---          |     |        |
| Cu        | ug/g              | < 0.9                | ---                            | ---    | ---         | ---          |     |        |
| Cu        | ug/mL             | < 1                  | ---                            | ---    | ---         | ---          |     |        |
| Density   | g/cm <sup>3</sup> | 1.096                | ---                            | ---    | ---         | ---          |     |        |
| Eu        | ng/g              | ---                  | 10 (1)                         | ---    | ---         | 10           | (1) | NAA    |
| Fe        | ug/g              | < 4.6                | 11 (1)                         | ---    | ---         | 11           | (1) | NAA    |
| Fe        | ug/mL             | < 5                  | ---                            | ---    | ---         | ---          |     |        |
| Flash Pt. | deg. C            | 70                   | ---                            | ---    | ---         | ---          |     |        |
| La        | ng/g              | ---                  | 500 (1)                        | ---    | ---         | 500          | (1) | NAA    |
| Mg        | ug/g              | < 0.9                | ---                            | ---    | ---         | ---          |     |        |
| Mg        | ug/mL             | < 1                  | ---                            | ---    | ---         | ---          |     |        |
| Mn        | ug/g              | < 0.9                | ---                            | ---    | ---         | ---          |     |        |
| Mn        | ug/mL             | < 1                  | ---                            | ---    | ---         | ---          |     |        |
| Mo        | ug/g              | < 0.9                | ---                            | ---    | ---         | ---          |     |        |
| Mo        | ug/mL             | < 1                  | ---                            | ---    | ---         | ---          |     |        |
| Na        | ug/g              | 28                   | 9.4 (1)                        | ---    | ---         | 9.4          | (1) | NAA    |
| Na        | ug/mL             | 31                   | ---                            | ---    | ---         | ---          |     |        |
| Ni        | ug/g              | < 0.9                | < 2                            | ---    | ---         | < 2          |     | NAA    |
| Ni        | ug/mL             | < 1                  | ---                            | ---    | ---         | ---          |     |        |
| S         | %                 | 4.504 $\pm$ 0.010    | 4.48 $\pm$ 0.02 (3)            | 4.49   | 4.46 - 4.49 | 4.49         | (1) | ICPES  |
| S         | %                 | ---                  | ---                            | ---    | ---         | 4.48         | (2) | NM     |
| Sb        | ng/g              | ---                  | 100 (1)                        | ---    | ---         | 100          | (1) | NAA    |
| Sc        | ug/g              | ---                  | 2 (1)                          | ---    | ---         | 2            | (1) | NAA    |
| Se        | ng/g              | ---                  | 80 (1)                         | ---    | ---         | 80           | (1) | NAA    |
| Si        | ug/g              | 12                   | ---                            | ---    | ---         | ---          |     |        |
| Si        | ug/mL             | 13                   | ---                            | ---    | ---         | ---          |     |        |
| Sm        | ug/g              | ---                  | 9 (1)                          | ---    | ---         | 9            | (1) | NAA    |
| Sn        | ug/g              | < 0.9                | ---                            | ---    | ---         | ---          |     |        |
| Sn        | ug/mL             | < 1                  | ---                            | ---    | ---         | ---          |     |        |
| Ti        | ug/g              | < 0.9                | ---                            | ---    | ---         | ---          |     |        |
| Ti        | ug/mL             | < 1                  | ---                            | ---    | ---         | ---          |     |        |
| V         | ng/g              | < 900                | < 200                          | ---    | ---         | < 200        |     | NAA    |
| V         | ug/mL             | < 1                  | ---                            | ---    | ---         | ---          |     |        |
| Zn        | ug/g              | 21                   | 0.7 (1)                        | ---    | ---         | 0.7          | (1) | NAA    |
| Zn        | ug/mL             | 23                   | ---                            | ---    | ---         | ---          |     |        |

TABLE 1620A-2: INDIVIDUAL DATA FOR NBS SRM 1620A (revised 3/1/86)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> | <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|------------------|--------------|------------|---------------|------------------|
| <u>As (ng/g)</u> |              |            |               |                  | <u>Ni (ug/g)</u> |              |            |               |                  |
| 40               | 10           |            | ITNA          | 85FIL 02         | <                | 2            |            | ITNA          | 85FIL 02         |
| <u>Br (ng/g)</u> |              |            |               |                  | <u>S (%)</u>     |              |            |               |                  |
| 600              | 600          |            | ITNA          | 85FIL 02         | 4.46             | 0.13         | 7          | NM            | 83LI 01          |
| <u>Cl (ug/g)</u> |              |            |               |                  | 4.49             | 0.03         |            | ICPES         | 85FAB 01         |
| 11.8             | 1            |            | ITNA          | 83LI 01          | 4.49             | 0.12         | 7          | NM            | 83LI 01          |
| <u>Co (ng/g)</u> |              |            |               |                  | <u>Sb (ng/g)</u> |              |            |               |                  |
| 80               | 60           |            | ITNA          | 85FIL 02         | 100              | 140          |            | ITNA          | 85FIL 02         |
| <u>Cr (ng/g)</u> |              |            |               |                  | <u>Sc (ug/g)</u> |              |            |               |                  |
| 200              | 70           |            | ITNA          | 85FIL 02         | 2                | 0.6          |            | ITNA          | 85FIL 02         |
| <u>Eu (ng/g)</u> |              |            |               |                  | <u>Se (ng/g)</u> |              |            |               |                  |
| 10               | 3            |            | ITNA          | 85FIL 02         | 80               | 20           |            | ITNA          | 85FIL 02         |
| <u>Fe (ug/g)</u> |              |            |               |                  | <u>Sm (ug/g)</u> |              |            |               |                  |
| 11               | 7            |            | ITNA          | 85FIL 02         | 9                | 5            |            | ITNA          | 85FIL 02         |
| <u>La (ng/g)</u> |              |            |               |                  | <u>V (ng/g)</u>  |              |            |               |                  |
| 500              | 300          |            | ITNA          | 85FIL 02         | <                | 200          |            | ITNA          | 85FIL 02         |
| <u>Na (ug/g)</u> |              |            |               |                  | <u>Zn (ug/g)</u> |              |            |               |                  |
| 9.4              | 2.9          |            | ITNA          | 85FIL 02         | 0.7              | 0.5          |            | ITNA          | 85FIL 02         |

TABLE 1621-1: COMPILED DATA FOR NBS SRM 1621 SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS             | CONSENSUS           | MEDIAN | RANGE      | METHOD MEANS |        |
|---------|-------|-----------------|---------------------|--------|------------|--------------|--------|
|         |       | Mean $\pm$ SD   | Mean $\pm$ SD (n)   |        |            | Mean (n)     | Method |
| S       | %     | 1.05 $\pm$ 0.02 | 1.01 $\pm$ 0.05 (5) | 1.05   | 0.9 - 1.06 | 1.06 (1)     | XRF    |
| S       | %     | ---             | ---                 | ---    | ---        | 0.99 (1)     | IC     |
| S       | %     | ---             | ---                 | ---    | ---        | 0.9 (1)      | MECA   |
| S       | %     | ---             | ---                 | ---    | ---        | 1.05 (1)     | TITR   |
| S       | %     | ---             | ---                 | ---    | ---        | 1.05 (1)     | CB     |

TABLE 1621-2: INDIVIDUAL DATA FOR NBS SRM 1621 (revised 3/1/86)

| Conc         | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|
| <u>S (%)</u> |       |     |        |           |
| 0.9          | 0.1   |     | MECA   | 80MCC 01  |
| 0.99         | 0.03  |     | IC     | 80MCC 01  |
| 1.05         | 0.01  |     | CB     | 84LEC 02  |
| 1.05         | 0.03  |     | TITR   | 80MCC 01  |
| 1.06         |       |     | XRF    | 80MCC 01  |

TABLE 1621A-1: COMPILED DATA FOR NBS SRM 1621A SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS             | CONSENSUS           | MEDIAN | RANGE        | METHOD MEANS |        |
|---------|-------|-----------------|---------------------|--------|--------------|--------------|--------|
|         |       | Mean $\pm$ SD   | Mean $\pm$ SD (n)   |        |              | Mean (n)     | Method |
| S       | %     | 0.94 $\pm$ 0.01 | 0.94 $\pm$ 0.03 (7) | 0.94   | 0.89 - 0.973 | 0.9715 (2)   | XRF    |
| S       | %     | ---             | ---                 | ---    | ---          | 0.935 (2)    | ICPES  |
| S       | %     | ---             | ---                 | ---    | ---          | 0.89 (1)     | POL    |
| S       | %     | ---             | ---                 | ---    | ---          | 0.945 (1)    | TITR   |
| S       | %     | ---             | ---                 | ---    | ---          | 0.931 (1)    | IC     |

TABLE 1621A-2: INDIVIDUAL DATA FOR NBS SRM 1621A (revised 3/1/86)

| Conc         | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|
| <u>S (%)</u> |       |     |        |           |
| 0.89         | 0.07  |     | POL    | 81REL 01  |
| 0.93         | 0.02  |     | ICPES  | 81WAL 02  |
| 0.931        | 0.01  |     | IC     | 82VIS 01  |
| 0.94         | 0.02  |     | ICPES  | 84BAR 03  |
| 0.945        | 0.014 |     | TITR   | 82VIS 01  |
| 0.97         | 0.009 | 6   | EXRF   | 81CHR 01  |
| 0.973        | 0.008 | 6   | EXRF   | 81CHR 01  |

TABLE 1621B-1: COMPILED DATA FOR NBS SRM 1621B SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT   | UNITS             | NBS          | CONSENSUS         | MEDIAN | RANGE         | METHOD MEANS      |        |  |
|-----------|-------------------|--------------|-------------------|--------|---------------|-------------------|--------|--|
|           |                   | Mean ± SD    | Mean ± SD (n)     |        |               | Mean ± SD (n)     | Method |  |
| Al        | ug/g              | 6.5          | ---               | ---    | ---           | ---               |        |  |
| Al        | ug/mL             | 6            | ---               | ---    | ---           | ---               |        |  |
| B         | ug/g              | < 1.1        | ---               | ---    | ---           | ---               |        |  |
| B         | ug/mL             | < 1          | ---               | ---    | ---           | ---               |        |  |
| Ca        | ug/g              | 9.7          | ---               | ---    | ---           | ---               |        |  |
| Ca        | ug/mL             | 9            | ---               | ---    | ---           | ---               |        |  |
| Cr        | ug/g              | 3.2          | ---               | ---    | ---           | ---               |        |  |
| Cr        | ug/mL             | 3            | ---               | ---    | ---           | ---               |        |  |
| Cu        | ug/g              | < 1.1        | ---               | ---    | ---           | ---               |        |  |
| Cu        | ug/mL             | < 1          | ---               | ---    | ---           | ---               |        |  |
| Density   | g/cm <sup>3</sup> | 0.929        | ---               | ---    | ---           | ---               |        |  |
| Fe        | ug/g              | < 5.4        | ---               | ---    | ---           | ---               |        |  |
| Fe        | ug/mL             | < 5          | ---               | ---    | ---           | ---               |        |  |
| Flash Pt. | deg. C            | 111          | ---               | ---    | ---           | ---               |        |  |
| Mg        | ug/g              | < 1.1        | ---               | ---    | ---           | ---               |        |  |
| Mg        | ug/mL             | < 1          | ---               | ---    | ---           | ---               |        |  |
| Mn        | ug/g              | 1.1          | ---               | ---    | ---           | ---               |        |  |
| Mn        | ug/mL             | 1            | ---               | ---    | ---           | ---               |        |  |
| Mo        | ug/g              | < 1.1        | ---               | ---    | ---           | ---               |        |  |
| Mo        | ug/mL             | < 1          | ---               | ---    | ---           | ---               |        |  |
| Na        | ug/g              | 8.6          | ---               | ---    | ---           | ---               |        |  |
| Na        | ug/mL             | 8            | ---               | ---    | ---           | ---               |        |  |
| Ni        | ug/g              | 6.5          | ---               | ---    | ---           | ---               |        |  |
| Ni        | ug/mL             | 6            | ---               | ---    | ---           | ---               |        |  |
| S         | %                 | 0.95 ± 0.005 | 0.948 ± 0.014 (7) | 0.944  | 0.935 - 0.975 | 0.954 ± 0.015 (4) | XRF    |  |
| S         | %                 | ---          | ---               | ---    | ---           | 0.953 (1)         | ICPES  |  |
| S         | %                 | ---          | ---               | ---    | ---           | 0.935 (2)         | COUL   |  |
| Si        | ug/g              | 6.5          | ---               | ---    | ---           | ---               |        |  |
| Si        | ug/mL             | 6            | ---               | ---    | ---           | ---               |        |  |
| Sn        | ug/g              | < 1.1        | ---               | ---    | ---           | ---               |        |  |
| Sn        | ug/mL             | < 1          | ---               | ---    | ---           | ---               |        |  |
| Ti        | ug/g              | < 1.1        | ---               | ---    | ---           | ---               |        |  |
| Ti        | ug/mL             | < 1          | ---               | ---    | ---           | ---               |        |  |
| V         | ug/g              | 16           | ---               | ---    | ---           | ---               |        |  |
| V         | ug/mL             | 15           | ---               | ---    | ---           | ---               |        |  |
| Zn        | ug/g              | 16           | ---               | ---    | ---           | ---               |        |  |
| Zn        | ug/mL             | 15           | ---               | ---    | ---           | ---               |        |  |

TABLE 1621B-2: INDIVIDUAL DATA FOR NBS SRM 1621B (revised 3/1/86)

| Conc         | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|
| <u>S (%)</u> |       |     |        |           |
| 0.935        |       |     | COUL   | 84TAK 01  |
| 0.935        |       |     | COUL   | 83TAK 01  |
| 0.944        |       |     | XRF    | 83TAK 01  |
| 0.944        |       |     | XRF    | 84TAK 01  |
| 0.953        | 0.003 |     | ICPES  | 85FAB 01  |
| 0.953        | 0.031 | 32  | EXRF   | 83SAN 02  |
| 0.975        | 0.031 | 32  | EXRF   | 83SAN 02  |

TABLE 1622-1: COMPILED DATA FOR NBS SRM 1622 SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS  |        | CONSENSUS |          | MEDIAN | RANGE       | METHOD MEANS |     |        |
|---------|-------|------|--------|-----------|----------|--------|-------------|--------------|-----|--------|
|         |       | Mean | ± SD   | Mean      | ± SD (n) |        |             | Mean         | (n) | Method |
| S       | %     | 2.14 | ± 0.01 | 2.16      | (2)      | ---    | 2.15 - 2.16 | 2.16         | (1) | ICPES  |
| S       | %     | ---  |        | ---       |          | ---    | ---         | 2.15         | (1) | CB     |

TABLE 1622-2: INDIVIDUAL DATA FOR NBS SRM 1622 (revised 3/1/86)

| Conc         | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|
| <u>S (%)</u> |       |     |        |           |
| 2.15         | 0.03  |     | CB     | 84LEC 02  |
| 2.16         | 0.02  |     | ICPES  | 85FAB 01  |

TABLE 1622A-1: COMPILED DATA FOR NBS SRM 1622A SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS  |        | CONSENSUS |            | MEDIAN | RANGE        | METHOD MEANS |     |        |
|---------|-------|------|--------|-----------|------------|--------|--------------|--------------|-----|--------|
|         |       | Mean | ± SD   | Mean      | ± SD (n)   |        |              | Mean         | (n) | Method |
| S       | %     | 1.96 | ± 0.04 | 2.00      | ± 0.03 (4) | 2.01   | 1.948 - 2.02 | 1.98         | (2) | XRF    |
| S       | %     | ---  |        | ---       |            | ---    | ---          | 2.02         | (2) | ICPES  |

TABLE 1622A-2: INDIVIDUAL DATA FOR NBS SRM 1622A (revised 3/1/86)

| Conc         | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|
| <u>S (%)</u> |       |     |        |           |
| 1.6          | 0.1   |     | POL    | 81REL 01  |
| 1.948        | 0.018 | 6   | EXRF   | 81CHR 01  |
| 2.01         | 0.02  |     | ICPES  | 84BAR 03  |
| 2.011        | 0.015 | 6   | EXRF   | 81CHR 01  |
| 2.02         | 0.02  |     | ICPES  | 81WAL 02  |

TABLE 1622C-1: COMPILED DATA FOR NBS SRM 1622C SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS           |
|---------|-------|---------------|
|         |       | Mean ± SD     |
| S       | %     | 2.012 ± 0.025 |

TABLE 1622B-1: COMPILED DATA FOR NBS SRM 1622B SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT   | UNITS             | NBS           |    | CONSENSUS   |     | MEDIAN | RANGE        | METHOD MEANS |      |       |
|-----------|-------------------|---------------|----|-------------|-----|--------|--------------|--------------|------|-------|
|           |                   | Mean          | SD | Mean        | SD  |        |              | (n)          | Mean | SD    |
| Al        | ug/g              | 8.1           |    | ---         |     | ---    | ---          | ---          |      |       |
| Al        | ug/mL             | 8             |    | ---         |     | ---    | ---          | ---          |      |       |
| B         | ug/g              | < 1           |    | ---         |     | ---    | ---          | ---          |      |       |
| B         | ug/mL             | < 1           |    | ---         |     | ---    | ---          | ---          |      |       |
| Ca        | ug/g              | 24.4          |    | ---         |     | ---    | ---          | ---          |      |       |
| Ca        | ug/mL             | 24            |    | ---         |     | ---    | ---          | ---          |      |       |
| Cr        | ug/g              | 1             |    | ---         |     | ---    | ---          | ---          |      |       |
| Cr        | ug/mL             | 1             |    | ---         |     | ---    | ---          | ---          |      |       |
| Cu        | ug/g              | < 1           |    | ---         |     | ---    | ---          | ---          |      |       |
| Cu        | ug/mL             | < 1           |    | ---         |     | ---    | ---          | ---          |      |       |
| Density   | g/cm <sup>3</sup> | 0.984         |    | ---         |     | ---    | ---          | ---          |      |       |
| Fe        | ug/g              | < 5.1         |    | ---         |     | ---    | ---          | ---          |      |       |
| Fe        | ug/mL             | < 5           |    | ---         |     | ---    | ---          | ---          |      |       |
| Flash Pt. | deg. C            | 65            |    | ---         |     | ---    | ---          | ---          |      |       |
| Mg        | ug/g              | 2             |    | ---         |     | ---    | ---          | ---          |      |       |
| Mg        | ug/mL             | 2             |    | ---         |     | ---    | ---          | ---          |      |       |
| Mn        | ug/g              | 1             |    | ---         |     | ---    | ---          | ---          |      |       |
| Mn        | ug/mL             | 1             |    | ---         |     | ---    | ---          | ---          |      |       |
| Mo        | ug/g              | < 1           |    | ---         |     | ---    | ---          | ---          |      |       |
| Mo        | ug/mL             | < 1           |    | ---         |     | ---    | ---          | ---          |      |       |
| Na        | ug/g              | 25.4          |    | ---         |     | ---    | ---          | ---          |      |       |
| Na        | ug/mL             | 25            |    | ---         |     | ---    | ---          | ---          |      |       |
| Ni        | ug/g              | 15.2          |    | ---         |     | ---    | ---          | ---          |      |       |
| Ni        | ug/mL             | 15            |    | ---         |     | ---    | ---          | ---          |      |       |
| S         | %                 | 1.982 ± 0.018 |    | 1.98 ± 0.01 | (6) | 1.979  | 1.971 - 2.01 | 2.00 ± 0.04  | (4)  | XRF   |
| S         | %                 | ---           |    | ---         |     | ---    | ---          | 2.01         | (1)  | ICPES |
| S         | %                 | ---           |    | ---         |     | ---    | ---          | 1.98         | (2)  | COUL  |
| Si        | ug/g              | 13.2          |    | ---         |     | ---    | ---          | ---          |      |       |
| Si        | ug/mL             | 13            |    | ---         |     | ---    | ---          | ---          |      |       |
| Sn        | ug/g              | < 1           |    | ---         |     | ---    | ---          | ---          |      |       |
| Sn        | ug/mL             | < 1           |    | ---         |     | ---    | ---          | ---          |      |       |
| Ti        | ug/g              | < 1           |    | ---         |     | ---    | ---          | ---          |      |       |
| Ti        | ug/mL             | < 1           |    | ---         |     | ---    | ---          | ---          |      |       |
| V         | ug/g              | 51            |    | ---         |     | ---    | ---          | ---          |      |       |
| V         | ug/mL             | 50            |    | ---         |     | ---    | ---          | ---          |      |       |
| Zn        | ug/g              | 11.2          |    | ---         |     | ---    | ---          | ---          |      |       |
| Zn        | ug/mL             | 11            |    | ---         |     | ---    | ---          | ---          |      |       |

TABLE 1622B-2: INDIVIDUAL DATA FOR NBS SRM 1622B (revised 3/1/86)

| Conc         | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|
| <u>S (%)</u> |       |     |        |           |
| 1.971        | 0.031 | 32  | EXRF   | 83SAN 02  |
| 1.977        |       |     | COUL   | 83TAK 01  |
| 1.977        |       |     | COUL   | 84TAK 01  |
| 1.979        |       |     | XRF    | 84TAK 01  |
| 1.979        |       |     | XRF    | 83TAK 01  |
| 2.01         | 0.02  |     | ICPES  | 85FAB 01  |
| 2.06         | 0.07  | 32  | EXRF   | 83SAN 02  |

TABLE 1623-1: COMPILED DATA FOR NBS SRM 1623 SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS       | CONSENSUS      | MEDIAN | RANGE       | METHOD MEANS |        |
|---------|-------|-----------|----------------|--------|-------------|--------------|--------|
|         |       | Mean ± SD | Mean ± SD (n)  |        |             | Mean (n)     | Method |
| S       | ug/g  | 2680 ± 40 | 2710 ± 130 (4) | 2650   | 2600 - 2900 | 2700 (1)     | XRF    |
| S       | ug/g  | ---       | ---            | ---    | ---         | 2600 (1)     | MECA   |
| S       | ug/g  | ---       | ---            | ---    | ---         | 2900 (1)     | TITR   |
| S       | ug/g  | ---       | ---            | ---    | ---         | 2650 (1)     | IC     |

TABLE 1623A-1: COMPILED DATA FOR NBS SRM 1623A SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

| ELEMENT   | UNITS             | NBS       | CONSENSUS     | MEDIAN | RANGE       | METHOD MEANS  |        |
|-----------|-------------------|-----------|---------------|--------|-------------|---------------|--------|
|           |                   | Mean ± SD | Mean ± SD (n) |        |             | Mean ± SD (n) | Method |
| Al        | ug/g              | 5.4       | ---           | ---    | ---         | ---           |        |
| Al        | ug/mL             | 5         | ---           | ---    | ---         | ---           |        |
| B         | ug/g              | < 1.1     | ---           | ---    | ---         | ---           |        |
| B         | ug/mL             | < 1       | ---           | ---    | ---         | ---           |        |
| Ca        | ug/g              | 9.8       | ---           | ---    | ---         | ---           |        |
| Ca        | ug/mL             | 9         | ---           | ---    | ---         | ---           |        |
| Cr        | ug/g              | 1.1       | ---           | ---    | ---         | ---           |        |
| Cr        | ug/mL             | 1         | ---           | ---    | ---         | ---           |        |
| Cu        | ug/g              | < 1.1     | ---           | ---    | ---         | ---           |        |
| Cu        | ug/mL             | < 1       | ---           | ---    | ---         | ---           |        |
| Density   | g/cm <sup>3</sup> | 0.918     | ---           | ---    | ---         | ---           |        |
| Fe        | ug/g              | < 5.4     | ---           | ---    | ---         | ---           |        |
| Fe        | ug/mL             | < 5       | ---           | ---    | ---         | ---           |        |
| Flash Pt. | deg. C            | 140       | ---           | ---    | ---         | ---           |        |
| Mg        | ug/g              | < 1.1     | ---           | ---    | ---         | ---           |        |
| Mg        | ug/mL             | < 1       | ---           | ---    | ---         | ---           |        |
| Mn        | ug/g              | < 1.1     | ---           | ---    | ---         | ---           |        |
| Mn        | ug/mL             | < 1       | ---           | ---    | ---         | ---           |        |
| Mo        | ug/g              | < 1.1     | ---           | ---    | ---         | ---           |        |
| Mo        | ug/mL             | < 1       | ---           | ---    | ---         | ---           |        |
| Na        | ug/g              | 9.8       | ---           | ---    | ---         | ---           |        |
| Na        | ug/mL             | 9         | ---           | ---    | ---         | ---           |        |
| Ni        | ug/g              | 1.1       | ---           | ---    | ---         | ---           |        |
| Ni        | ug/mL             | 1         | ---           | ---    | ---         | ---           |        |
| S         | ug/g              | 2400 ± 30 | 2340 ± 50 (6) | 2310   | 2300 - 2400 | 2370 ± 40 (4) | XRF    |
| S         | ug/g              | ---       | ---           | ---    | ---         | 2300 (2)      | COUL   |
| Si        | ug/g              | < 1.1     | ---           | ---    | ---         | ---           |        |
| Si        | ug/mL             | < 1       | ---           | ---    | ---         | ---           |        |
| Sn        | ug/g              | < 1.1     | ---           | ---    | ---         | ---           |        |
| Sn        | ug/mL             | < 1       | ---           | ---    | ---         | ---           |        |
| Ti        | ug/g              | < 1.1     | ---           | ---    | ---         | ---           |        |
| Ti        | ug/mL             | < 1       | ---           | ---    | ---         | ---           |        |
| V         | ug/g              | 3.3       | ---           | ---    | ---         | ---           |        |
| V         | ug/mL             | 3         | ---           | ---    | ---         | ---           |        |
| Zn        | ug/g              | 16.3      | ---           | ---    | ---         | ---           |        |
| Zn        | ug/mL             | 15        | ---           | ---    | ---         | ---           |        |

TABLE 1623-2: INDIVIDUAL DATA FOR NBS SRM 1623  
(revised 3/1/86)

| Conc            | Uncer | Com | Method | Reference |
|-----------------|-------|-----|--------|-----------|
| <u>S (ug/g)</u> |       |     |        |           |
| 2600            | 200   |     | MECA   | 80MCC 01  |
| 2650            | 40    |     | IC     | 80MCC 01  |
| 2700            |       |     | XRF    | 80MCC 01  |
| 2900            | 500   |     | TITR   | 80MCC 01  |

TABLE 1623A-2: INDIVIDUAL DATA FOR NBS SRM 1623A  
(revised 3/1/86)

| Conc            | Uncer | Com | Method | Reference |
|-----------------|-------|-----|--------|-----------|
| <u>S (ug/g)</u> |       |     |        |           |
| 2300            |       |     | COUL   | 84TAK 01  |
| 2300            |       |     | COUL   | 83TAK 01  |
| 2310            | 240   | 32  | EXRF   | 83SAN 02  |
| 2380            |       |     | XRF    | 84TAK 01  |
| 2380            |       |     | XRF    | 83TAK 01  |
| 2400            | 50    | 32  | EXRF   | 83SAN 02  |

TABLE 1624-1: COMPILED DATA FOR NBS SRM 1624 SULFUR IN DISTILLATE OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean ± SD | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE       | METHOD MEANS<br>Mean (n) Method |
|---------|-------|------------------|----------------------------|--------|-------------|---------------------------------|
| S       | ug/g  | 2110 ± 40        | 2050 ± 120 (4)             | 2030   | 1900 - 2200 | 1900 (1) ICPES                  |
| S       | ug/g  | ---              | ---                        | ---    | ---         | 2200 (1) POL                    |
| S       | ug/g  | ---              | ---                        | ---    | ---         | 2030 (1) TITR                   |
| S       | ug/g  | ---              | ---                        | ---    | ---         | 2080 (1) IC                     |

TABLE 1624A-1: COMPILED DATA FOR NBS SRM 1624A SULFUR IN DISTILLATE OIL (revised 3/1/86)

| ELEMENT | UNITS             | NBS<br>Mean ± SD | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE       | METHOD MEANS<br>Mean ± SD (n) Method |
|---------|-------------------|------------------|----------------------------|--------|-------------|--------------------------------------|
| Al      | ug/g              | 1.2              | ---                        | ---    | ---         | ---                                  |
| Al      | ug/mL             | 1                | ---                        | ---    | ---         | ---                                  |
| B       | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| B       | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| Ca      | ug/g              | 8.2              | ---                        | ---    | ---         | ---                                  |
| Ca      | ug/mL             | 7                | ---                        | ---    | ---         | ---                                  |
| Cr      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Cr      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| Cu      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Cu      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| Density | g/cm <sup>3</sup> | 0.848            | ---                        | ---    | ---         | ---                                  |
| Fe      | ug/g              | < 5.9            | ---                        | ---    | ---         | ---                                  |
| Fe      | ug/mL             | < 5              | ---                        | ---    | ---         | ---                                  |
| Mg      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Mg      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| Mn      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Mn      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| Mo      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Mo      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| Na      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Na      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| Ni      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Ni      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| S       | ug/g              | 1410 ± 20        | 1420 ± 20 (5)              | 1420   | 1400 - 1450 | 1440 ± 20 (3) XRF                    |
| S       | ug/g              | ---              | ---                        | ---    | ---         | 1400 (2) COUL                        |
| Si      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Si      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| Sn      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Sn      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| Ti      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Ti      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| V       | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| V       | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |
| Zn      | ug/g              | < 1.2            | ---                        | ---    | ---         | ---                                  |
| Zn      | ug/mL             | < 1              | ---                        | ---    | ---         | ---                                  |

TABLE 1624-2: INDIVIDUAL DATA FOR NBS SRM 1624  
(revised 3/1/86)

| <u>Conc</u>     | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|-----------------|--------------|------------|---------------|------------------|
| <u>S (ug/g)</u> |              |            |               |                  |
| 1900            | 100          |            | ICPES         | 81WAL 02         |
| 2030            | 50           |            | TITR          | 82VIS 01         |
| 2080            | 210          |            | IC            | 82VIS 01         |
| 2200            | 200          |            | POL           | 81REL 01         |

TABLE 1624A-2: INDIVIDUAL DATA FOR NBS SRM 1624A  
(revised 3/1/86)

| <u>Conc</u>     | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|-----------------|--------------|------------|---------------|------------------|
| <u>S (ug/g)</u> |              |            |               |                  |
| 1400            |              |            | COUL          | 84TAK 01         |
| 1400            |              |            | COUL          | 83TAK 01         |
| 1420            | 90           | 32         | EXRF          | 83SAN 02         |
| 1450            |              |            | XRF           | 83TAK 01         |
| 1450            |              |            | XRF           | 84TAK 01         |
| 1540            | 280          | 32         | EXRF          | 83SAN 02         |

TABLE 1630-1: COMPILED DATA FOR NBS SRM 1630 MERCURY IN COAL (revised 3/1/86)

| ELEMENT | UNITS | NBS       |  | CONSENSUS   |      | MEDIAN | RANGE       | METHOD MEANS |     |        |
|---------|-------|-----------|--|-------------|------|--------|-------------|--------------|-----|--------|
|         |       | Mean ± SD |  | Mean ± SD   | (n)  |        |             | Mean ± SD    | (n) | Method |
| ASH     | %     | ---       |  | 2.2         | (1)  | ---    | ---         | 2.2          | (1) | CB     |
| Al      | ug/g  | ---       |  | 5300        | (1)  | ---    | ---         | ---          |     |        |
| As      | ug/g  | ---       |  | 19          | (1)  | ---    | ---         | ---          |     |        |
| B       | ug/g  | ---       |  | 5           | (1)  | ---    | ---         | ---          |     |        |
| Be      | ug/g  | ---       |  | 1           | (1)  | ---    | ---         | ---          |     |        |
| Br      | ug/g  | ---       |  | 33          | (2)  | ---    | 29 - 37     | 37           | (1) | NAA    |
| Ca      | ug/g  | ---       |  | 700         | (1)  | ---    | ---         | ---          |     |        |
| Cd      | ng/g  | ---       |  | < 200       |      | ---    | ---         | ---          |     |        |
| Cl      | ug/g  | ---       |  | 1725        | (2)  | ---    | 1230 - 2220 | 1230         | (1) | IC     |
| Co      | ug/g  | ---       |  | 4.8         | (2)  | ---    | 3.6 - 6     | 3.6          | (1) | NAA    |
| Cr      | ug/g  | ---       |  | 7.55        | (2)  | ---    | 7.1 - 8     | 7.1          | (1) | NAA    |
| Cu      | ug/g  | ---       |  | 16          | (1)  | ---    | ---         | ---          |     |        |
| F       | ug/g  | ---       |  | 25          | (1)  | ---    | ---         | ---          |     |        |
| Fe      | %     | ---       |  | 0.77        | (2)  | ---    | 0.51 - 1.04 | 0.51         | (1) | NAA    |
| Ga      | ug/g  | ---       |  | 1.08        | (2)  | ---    | 1.07 - 1.1  | 1.07         | (1) | NAA    |
| Ge      | ug/g  | ---       |  | 1           | (1)  | ---    | ---         | ---          |     |        |
| H2O-    | %     | ---       |  | 0.4         | (1)  | ---    | ---         | 0.4          | (1) | GRAV   |
| Hg      | ng/g  | 130 ± 10  |  | 126 ± 13    | (20) | 127    | 104 - 150   | 122 ± 13     | (9) | NAA    |
| Hg      | ng/g  | ---       |  | ---         |      | ---    | ---         | 135          | (1) | OES    |
| Hg      | ng/g  | ---       |  | ---         |      | ---    | ---         | 118          | (1) | FAE    |
| Hg      | ng/g  | ---       |  | ---         |      | ---    | ---         | 130 ± 14     | (8) | AA     |
| K       | ug/g  | ---       |  | 800         | (1)  | ---    | ---         | ---          |     |        |
| La      | ug/g  | ---       |  | 4.4         | (1)  | ---    | ---         | 4.4          | (1) | NAA    |
| Mg      | ug/g  | ---       |  | 200         | (1)  | ---    | ---         | ---          |     |        |
| Mn      | ug/g  | ---       |  | 6           | (1)  | ---    | ---         | ---          |     |        |
| Mo      | ug/g  | ---       |  | 2           | (1)  | ---    | ---         | ---          |     |        |
| Na      | ug/g  | ---       |  | 405         | (2)  | ---    | 320 - 490   | 490          | (1) | NAA    |
| Ni      | ug/g  | ---       |  | 10          | (1)  | ---    | ---         | ---          |     |        |
| P       | ug/g  | ---       |  | 17          | (1)  | ---    | ---         | ---          |     |        |
| Pb      | ug/g  | ---       |  | 4           | (1)  | ---    | ---         | ---          |     |        |
| S       | %     | ---       |  | 1.14 ± 0.20 | (3)  | 1.07   | 0.99 - 1.37 | 1.37         | (1) | XRF    |
| S       | %     | ---       |  | ---         |      | ---    | ---         | 0.99         | (1) | IC     |
| S       | %     | ---       |  | ---         |      | ---    | ---         | 1.07         | (1) | CB     |
| Sb      | ug/g  | ---       |  | 1.15        | (2)  | ---    | 0.6 - 1.7   | 1.7          | (1) | NAA    |
| Sc      | ug/g  | ---       |  | 1.4         | (1)  | ---    | ---         | 1.4          | (1) | NAA    |
| Se      | ug/g  | 2.1       |  | 2.2 ± 0.2   | (6)  | 2.11   | 2.0 - 2.6   | 2.23 ± 0.25  | (4) | NAA    |
| Se      | ug/g  | ---       |  | ---         |      | ---    | ---         | 2.12         | (1) | ICPES  |
| Si      | ug/g  | ---       |  | 7200        | (1)  | ---    | ---         | ---          |     |        |
| Sn      | ug/g  | ---       |  | 6           | (1)  | ---    | ---         | ---          |     |        |
| Ti      | ug/g  | ---       |  | 500         | (1)  | ---    | ---         | ---          |     |        |
| V       | ug/g  | ---       |  | 24          | (1)  | ---    | ---         | ---          |     |        |
| Zn      | ug/g  | ---       |  | 6           | (1)  | ---    | ---         | ---          |     |        |
| Zr      | ug/g  | ---       |  | 21          | (1)  | ---    | ---         | ---          |     |        |

TABLE 1630-2: INDIVIDUAL DATA FOR NBS SRM 1630 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer  | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|--------|-----|--------|-----------|
| <u>Al (ug/g)</u> |       |     |        |           | <u>F (ug/g)</u>  |        |     |        |           |
| 5300             |       |     | VV     | 77GLU 01  | 25               |        |     | VV     | 77GLU 01  |
| <u>As (ug/g)</u> |       |     |        |           | <u>Fe (%)</u>    |        |     |        |           |
| 19               |       |     | VV     | 77GLU 01  | 0.51             | 0.0204 |     | ITNA   | 74TAM 01  |
|                  |       |     |        |           | 1.04             |        |     | VV     | 77GLU 01  |
| <u>ASH (%)</u>   |       |     |        |           | <u>Ga (ug/g)</u> |        |     |        |           |
| 2.2              |       |     | CB     | 77GLU 01  | 1.07             | 0.04   |     | RTNA   | 72SAN 01  |
| <u>B (ug/g)</u>  |       |     |        |           | 1.1              |        |     | VV     | 77GLU 01  |
| 5                |       |     | VV     | 77GLU 01  | <u>Ge (ug/g)</u> |        |     |        |           |
| <u>Be (ug/g)</u> |       |     |        |           | 1                |        |     | VV     | 77GLU 01  |
| 1                |       |     | VV     | 77GLU 01  | <u>H2O- (%)</u>  |        |     |        |           |
| <u>Br (ug/g)</u> |       |     |        |           | 0.4              |        |     | GRAV   | 77GLU 01  |
| 29               |       |     | VV     | 77GLU 01  | <u>Hg (ng/g)</u> |        |     |        |           |
| 37               |       |     | ITNA   | 74TAM 01  | 104              | 6      |     | CVAA   | 80NAD 01  |
| <u>Ca (ug/g)</u> |       |     |        |           | 105              |        |     | RTNA   | 74RIC 01  |
| 700              |       |     | VV     | 77GLU 01  | 105              | 30     |     | RTNA   | 72LYO 01  |
| <u>Cd (ug/g)</u> |       |     |        |           | 106              |        |     | ITNA   | 74RIC 01  |
| <                | 0.2   | L   | VV     | 77GLU 01  | 118              | 11     |     | FAE    | 76CAV 01  |
| <u>Cl (ug/g)</u> |       |     |        |           | 120              | 10     |     | CVAA   | 73LO 01   |
| 1230             | 40    |     | IC     | 85GEN 01  | 124              | 11     |     | CVAA   | 82DOO 01  |
| 2220             |       |     | VV     | 77GLU 01  | 125              | 10     |     | CVAA   | 75WIM 01  |
| <u>Co (ug/g)</u> |       |     |        |           | 127              | 5      |     | RTNA   | 74ORV 01  |
| 3.6              | 0.18  |     | ITNA   | 74TAM 01  | 127              | 6      |     | RTNA   | 72RAI 01  |
| 6                |       |     | VV     | 77GLU 01  | 127              | 12     |     | RTNA   | 72ROO 01  |
| <u>Cr (ug/g)</u> |       |     |        |           | 130              | 10     |     | RTNA   | 75LIT 01  |
| 7.1              | 0.35  |     | ITNA   | 74TAM 01  | 130              | 10     |     | ITNA   | 74TAM 01  |
| 8                |       |     | VV     | 77GLU 01  | 135              |        |     | OES    | 75PEC 01  |
| <u>Cu (ug/g)</u> |       |     |        |           | 136              | 7      |     | FAA    | 82UCH 02  |
| 16               |       |     | VV     | 77GLU 01  | 139              | 7      |     | CVAA   | 72RAI 01  |
|                  |       |     |        |           | 139              | 12     |     | FAA    | 72ROO 01  |
|                  |       |     |        |           | 140              |        |     | RTNA   | 75FRO 01  |
|                  |       |     |        |           | 140              |        |     | VV     | 77GLU 01  |
|                  |       |     |        |           | 150              |        |     | CVAA   | 75MUR 01  |
|                  |       |     |        |           | 486              | 60     |     | ITNA   | 75LIT 01  |
|                  |       |     |        |           | <u>K (ug/g)</u>  |        |     |        |           |
|                  |       |     |        |           | 800              |        |     | VV     | 77GLU 01  |
|                  |       |     |        |           | <u>La (ug/g)</u> |        |     |        |           |
|                  |       |     |        |           | 4.4              |        |     | ITNA   | 74TAM 01  |

TABLE 1630-2: INDIVIDUAL DATA FOR NBS SRM 1630 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mg (ug/g)</u> |       |     |        |           | <u>Sb (ug/g)</u> |       |     |        |           |
| 200              |       |     | VV     | 77GLU 01  | 0.6              |       |     | VV     | 77GLU 01  |
|                  |       |     |        |           | 1.7              | 0.51  |     | ITNA   | 74TAM 01  |
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Sc (ug/g)</u> |       |     |        |           |
| 6                |       |     | VV     | 77GLU 01  | 1.4              | 0.06  |     | ITNA   | 74TAM 01  |
| <u>Mo (ug/g)</u> |       |     |        |           | <u>Se (ug/g)</u> |       |     |        |           |
| 2                |       |     | VV     | 77GLU 01  | 2                |       |     | VV     | 77GLU 01  |
| <u>Na (ug/g)</u> |       |     |        |           | 2.09             | 0.06  |     | RTNA   | 74ORV 01  |
| 320              |       |     | VV     | 77GLU 01  | 2.11             | 0.09  |     | RTNA   | 72ROO 03  |
| 490              |       |     | ITNA   | 74TAM 01  | 2.11             | 0.09  |     | RTNA   | 77ROO 02  |
| <u>Ni (ug/g)</u> |       |     |        |           | 2.12             | 0.09  |     | ICPES  | 80HAA 01  |
| 10               |       |     | VV     | 77GLU 01  | 2.6              | 0.21  |     | ITNA   | 74TAM 01  |
| <u>P (ug/g)</u>  |       |     |        |           | <u>Si (ug/g)</u> |       |     |        |           |
| 17               |       |     | VV     | 77GLU 01  | 7200             |       |     | VV     | 77GLU 01  |
| <u>Pb (ug/g)</u> |       |     |        |           | <u>Sn (ug/g)</u> |       |     |        |           |
| 4                |       |     | VV     | 77GLU 01  | 6                |       |     | VV     | 77GLU 01  |
| <u>S (%)</u>     |       |     |        |           | <u>Ti (ug/g)</u> |       |     |        |           |
| 0.99             | 0.05  |     | IC     | 85GEN 01  | 500              |       |     | VV     | 77GLU 01  |
| 1.07             |       |     | CB     | 77GLU 01  | <u>V (ug/g)</u>  |       |     |        |           |
| 1.37             |       |     | XRF    | 77GLU 01  | 24               |       |     | VV     | 77GLU 01  |
|                  |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 6                |       |     | VV     | 77GLU 01  |
|                  |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 21               |       |     | VV     | 77GLU 01  |

TABLE 1631A-1: COMPILED DATA FOR NBS SRM 1631A SULFUR IN COAL  
(revised 3/1/86)

| ELEMENT | UNITS | NBS  |        | CONSENSUS |       |     | MEDIAN | RANGE       | METHOD MEANS |       |            |
|---------|-------|------|--------|-----------|-------|-----|--------|-------------|--------------|-------|------------|
|         |       | Mean | SD     | Mean      | SD    | (n) |        |             | Mean         | SD    | (n) Method |
| ASH     | %     | 5.00 | ± 0.02 | ---       | ---   | --- | ---    | ---         | ---          | ---   | ---        |
| H2O     | %     | 0.84 |        | ---       | ---   | --- | ---    | ---         | ---          | ---   | ---        |
| Hg      | ng/g  | 73   |        | ---       | ---   | --- | ---    | ---         | ---          | ---   | ---        |
| Pb      | ug/g  | 5.44 |        | ---       | ---   | --- | ---    | ---         | ---          | ---   | ---        |
| S       | ug/g  | 5460 | ± 30   | 5570      | ± 250 | (8) | 5460   | 5260 - 5990 | 5900         | (1)   | TCGS       |
| S       | ug/g  | ---  | ---    | ---       | ---   | --- | ---    | ---         | 5375         | (2)   | TITR       |
| S       | ug/g  | ---  | ---    | ---       | ---   | --- | ---    | ---         | 5460         | (1)   | IC         |
| S       | ug/g  | ---  | ---    | ---       | ---   | --- | ---    | ---         | 5610         | ± 260 | (4) CB     |

TABLE 1631B-1: COMPILED DATA FOR NBS SRM 1631B SULFUR IN COAL  
(revised 3/1/86)

| ELEMENT | UNITS | NBS   |         | CONSENSUS |        |     | MEDIAN | RANGE       | METHOD MEANS |     |            |
|---------|-------|-------|---------|-----------|--------|-----|--------|-------------|--------------|-----|------------|
|         |       | Mean  | SD      | Mean      | SD     | (n) |        |             | Mean         | SD  | (n) Method |
| ASH     | %     | 14.59 | ± 0.09  | ---       | ---    | --- | ---    | ---         | ---          | --- | ---        |
| H2O     | %     | 0.69  |         | ---       | ---    | --- | ---    | ---         | ---          | --- | ---        |
| Hg      | ng/g  | 41    |         | ---       | ---    | --- | ---    | ---         | ---          | --- | ---        |
| Pb      | ug/g  | 5.97  |         | ---       | ---    | --- | ---    | ---         | ---          | --- | ---        |
| S       | %     | 2.016 | ± 0.014 | 2.01      | ± 0.08 | (6) | 1.97   | 1.92 - 2.14 | 2.02         | (1) | TCGS       |
| S       | %     | ---   | ---     | ---       | ---    | --- | ---    | ---         | 1.98         | (2) | TITR       |
| S       | %     | ---   | ---     | ---       | ---    | --- | ---    | ---         | 1.97         | (1) | IC         |
| S       | %     | ---   | ---     | ---       | ---    | --- | ---    | ---         | 2.045        | (2) | CB         |

TABLE 1631C-1: COMPILED DATA FOR NBS SRM 1631C SULFUR IN COAL  
(revised 3/1/86)

| ELEMENT | UNITS | NBS  |         | CONSENSUS |        |     | MEDIAN | RANGE        | METHOD MEANS |        |            |
|---------|-------|------|---------|-----------|--------|-----|--------|--------------|--------------|--------|------------|
|         |       | Mean | SD      | Mean      | SD     | (n) |        |              | Mean         | SD     | (n) Method |
| ASH     | %     | 6.17 | ± 0.02  | ---       | ---    | --- | ---    | ---          | ---          | ---    | ---        |
| H2O     | %     | 0.47 |         | ---       | ---    | --- | ---    | ---          | ---          | ---    | ---        |
| S       | %     | 3.02 | ± 0.008 | 3.03      | ± 0.06 | (7) | 3.00   | 2.97 - 3.117 | 2.98         | (1)    | TCGS       |
| S       | %     | ---  | ---     | ---       | ---    | --- | ---    | ---          | 3.05         | (2)    | TITR       |
| S       | %     | ---  | ---     | ---       | ---    | --- | ---    | ---          | 3.09         | (1)    | IC         |
| S       | %     | ---  | ---     | ---       | ---    | --- | ---    | ---          | 3.00         | ± 0.04 | (3) CB     |

TABLE 1631A-2: INDIVIDUAL DATA FOR NBS SRM 1631A  
(revised 3/1/86)

| Conc            | Uncer | Com | Method | Reference |
|-----------------|-------|-----|--------|-----------|
| <u>S (ug/g)</u> |       |     |        |           |
| 5260            | 350   |     | TITR   | 80ARO 01  |
| 5420            | 60    |     | CB     | 86GAU 01  |
| 5450            | 80    |     | CB     | 84LEC 02  |
| 5460            |       |     | IC     | 77SMI 05  |
| 5490            |       |     | TITR   | 74HIC 01  |
| 5590            | 50    |     | CB     | 84GLA 11  |
| 5900            | 400   |     | TCGS   | 77JUR 01  |
| 5990            | 20    |     | CB     | 85GLA 03  |

TABLE 1631B-2: INDIVIDUAL DATA FOR NBS SRM 1631B  
(revised 3/1/86)

| Conc         | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|
| <u>S (%)</u> |       |     |        |           |
| 1.92         |       |     | TITR   | 74HIC 01  |
| 1.95         | 0.07  |     | CB     | 85GLA 03  |
| 1.97         |       |     | IC     | 77SMI 05  |
| 2.02         | 0.05  |     | TCGS   | 77JUR 01  |
| 2.042        | 0.067 |     | TITR   | 80ARO 01  |
| 2.14         | 0.09  |     | CB     | 86GAU 01  |

TABLE 1631C-2: INDIVIDUAL DATA FOR NBS SRM 1631C  
(revised 3/1/86)

| Conc         | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|
| <u>S (%)</u> |       |     |        |           |
| 2.97         |       |     | CB     | 82ANO 01  |
| 2.98         | 0.02  |     | TCGS   | 77JUR 01  |
| 2.99         |       |     | TITR   | 74HIC 01  |
| 3            | 0.05  |     | CB     | 85GLA 03  |
| 3.04         | 0.03  |     | CB     | 86GAU 01  |
| 3.09         |       |     | IC     | 77SMI 05  |
| 3.117        | 0.097 |     | TITR   | 80ARO 01  |

TABLE 1632-1: COMPILED DATA FOR NBS SRM 1632 TRACE ELEMENTS IN COAL (revised 3/1/86)

| ELE | UNITS | NBS        |     | CONSENSUS   |      | MEDIAN | RANGE        | AA          |      | NAA         |      | ICPES       |     | XRF        |     | OTHER METHODS |     | Mean  | (n)  | Method |       |       |
|-----|-------|------------|-----|-------------|------|--------|--------------|-------------|------|-------------|------|-------------|-----|------------|-----|---------------|-----|-------|------|--------|-------|-------|
|     |       | Mean       | SD  | Mean        | SD   |        |              | Mean        | SD   | Mean        | SD   | Mean        | SD  | Mean       | SD  | Mean          | SD  |       |      |        | Mean  | SD    |
| ASH | %     | ---        | --- | 12.7        | (2)  | ---    | 12.17 - 13.2 | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | 12.68         | (2) | CB    | ---  | ---    | ---   |       |
| Ag  | ng/g  | < 100      | --- | 63 ± 13     | (5)  | 60     | 45 - 80      | 80          | (1)  | 55 ± 9      | (3)  | ---         | --- | ---        | --- | 70            | (1) | SSMS  | ---  | ---    | ---   |       |
| Al  | %     | ---        | --- | 1.73 ± 0.10 | (32) | 1.72   | 1.57 - 1.9   | 1.71        | (2)  | 1.74 ± 0.10 | (21) | 1.70 ± 0.09 | (8) | ---        | --- | 1.68          | (1) | TCGS  | ---  | ---    | ---   |       |
| As  | ug/g  | 5.9 ± 0.6  | --- | 5.8 ± 0.5   | (52) | 5.8    | 4.61 - 7     | 5.64 ± 0.06 | (5)  | 5.9 ± 0.4   | (29) | 5.9         | (2) | 5.8 ± 1.0  | (3) | 6.0 ± 0.3     | (6) | PAA   | 5    | (1)    | OES   |       |
| As  | ug/g  | ---        | --- | ---         | ---  | ---    | ---          | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | ---           | --- | ---   | ---  | 6.1    | (1)   | GCMES |
| As  | ug/g  | ---        | --- | ---         | ---  | ---    | ---          | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | 5.4           | (1) | COLOR | 5.55 | (2)    | FAE   |       |
| Au  | ng/g  | ---        | --- | 0.92        | (2)  | ---    | 0.85 - 0.99  | ---         | ---  | 0.92        | (2)  | ---         | --- | ---        | --- | ---           | --- | ---   | ---  | ---    | ---   | ---   |
| B   | ug/g  | ---        | --- | 41 ± 8      | (7)  | 43     | 29 - 47.7    | ---         | ---  | ---         | ---  | 29          | (1) | ---        | --- | 46.1 ± 2.7    | (4) | TCGS  | 30   | (1)    | OES   |       |
| Ba  | ug/g  | ---        | --- | 326 ± 32    | (33) | 314    | 256 - 390    | ---         | ---  | 332 ± 31    | (27) | 240 ± 70    | (5) | 301        | (1) | 314           | (2) | PAA   | ---  | ---    | ---   |       |
| Be  | ug/g  | 1.5        | --- | 1.62 ± 0.10 | (13) | 1.63   | 1.49 - 1.85  | 1.60 ± 0.08 | (9)  | 1.7         | (1)  | 1.77 ± 0.08 | (3) | ---        | --- | 1.2           | (1) | OES   | 1.49 | (1)    | FLUOR |       |
| Bi  | ug/g  | ---        | --- | 1.05        | (1)  | ---    | ---          | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | 1.05          | (1) | PAA   | ---  | ---    | ---   |       |
| Br  | ug/g  | ---        | --- | 17.7 ± 1.7  | (32) | 18     | 14 - 20      | ---         | ---  | 17.6 ± 1.8  | (28) | ---         | --- | 19.0 ± 2.7 | (5) | ---           | --- | ---   | ---  | ---    | ---   | ---   |
| C   | %     | ---        | --- | 70.6 ± 1.7  | (5)  | 70     | 68.93 - 73   | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | 70.1 ± 1.4    | (3) | CB    | 71.5 | (2)    | TCGS  |       |
| Ca  | ug/g  | ---        | --- | 4180 ± 420  | (30) | 4200   | 3300 - 5100  | 4950        | (1)  | 4040 ± 320  | (14) | 4150 ± 230  | (7) | 4310       | (2) | 4450          | (2) | PAA   | 5100 | (1)    | OES   |       |
| Ca  | ug/g  | ---        | --- | ---         | ---  | ---    | ---          | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | ---           | --- | ---   | 2840 | (1)    | GAMMA |       |
| Ca  | ug/g  | ---        | --- | ---         | ---  | ---    | ---          | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | ---           | --- | ---   | 4030 | (1)    | 14NAA |       |
| Cd  | ng/g  | 190 ± 30   | --- | 209 ± 26    | (26) | 200    | 170 - 250    | 222 ± 26    | (10) | 220 ± 17    | (3)  | ---         | --- | ---        | --- | 205 ± 23      | (6) | PAA   | 310  | (1)    | IDMS  |       |
| Cd  | ng/g  | ---        | --- | ---         | ---  | ---    | ---          | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | 190           | (1) | POL   | 190  | (2)    | TCGS  |       |
| Cd  | ng/g  | ---        | --- | ---         | ---  | ---    | ---          | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | 200           | (2) | SSMS  | 180  | (2)    | AF    |       |
| Ce  | ug/g  | ---        | --- | 20.7 ± 1.9  | (26) | 20.4   | 17.34 - 26   | ---         | ---  | 20.4 ± 1.8  | (22) | 22.8        | (1) | 24         | (1) | 20            | (1) | PAA   | 26.5 | (2)    | OES   |       |
| Cl  | ug/g  | ---        | --- | 876 ± 64    | (31) | 880    | 750 - 1000   | ---         | ---  | 874 ± 71    | (22) | ---         | --- | 810        | (2) | 910           | (2) | PAA   | 882  | (2)    | IC    |       |
| Cl  | ug/g  | ---        | --- | ---         | ---  | ---    | ---          | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | 895           | (1) | TCGS  | 922  | (2)    | ISE   |       |
| Co  | ug/g  | 6          | --- | 5.6 ± 0.6   | (43) | 5.7    | 3.9 - 7      | 6.1 ± 0.8   | (3)  | 5.8 ± 0.5   | (30) | 5.0 ± 0.8   | (6) | 6.75       | (2) | 5.55          | (2) | PAA   | 4.7  | (1)    | OES   |       |
| Cr  | ug/g  | 20.2 ± 0.5 | --- | 19.6 ± 1.5  | (47) | 19.6   | 16 - 23      | 19.7 ± 0.4  | (8)  | 19.7 ± 1.3  | (28) | 17 ± 2      | (6) | 20         | (2) | 20.6          | (2) | PAA   | 16   | (1)    | OES   |       |
| Cr  | ug/g  | ---        | --- | ---         | ---  | ---    | ---          | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | ---           | --- | ---   | ---  | 19     | (1)   | SSMS  |
| Cs  | ug/g  | ---        | --- | 1.50 ± 0.18 | (24) | 1.46   | 1.3 - 2.3    | ---         | ---  | 1.52 ± 0.18 | (22) | ---         | --- | 1.4        | (1) | 1.3           | (1) | PAA   | ---  | ---    | ---   |       |
| Cu  | ug/g  | 18 ± 2     | --- | 17.4 ± 2.2  | (33) | 17.4   | 13 - 23      | 18.2 ± 1.6  | (9)  | 15.8 ± 1.5  | (6)  | 17.6 ± 1.4  | (6) | 18 ± 4     | (8) | 16.7 ± 1.7    | (3) | SSMS  | 24   | (1)    | PAA   |       |
| Cu  | ug/g  | ---        | --- | ---         | ---  | ---    | ---          | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | ---           | --- | ---   | ---  | 17     | (1)   | OES   |
| Dy  | ug/g  | ---        | --- | 1.23 ± 0.2  | (12) | 1.2    | 0.85 - 1.59  | 1.3         | (1)  | 1.2 ± 0.2   | (11) | ---         | --- | ---        | --- | ---           | --- | ---   | ---  | ---    | ---   | ---   |
| Er  | ug/g  | ---        | --- | 5           | (2)  | ---    | 0.7 - 9.3    | 0.7         | (1)  | 9.3         | (1)  | ---         | --- | ---        | --- | ---           | --- | ---   | ---  | ---    | ---   | ---   |
| Eu  | ng/g  | ---        | --- | 360 ± 40    | (26) | 350    | 280 - 420    | 400         | (1)  | 350 ± 40    | (23) | 420         | (1) | ---        | --- | 410           | (1) | OES   | ---  | ---    | ---   |       |
| F   | ug/g  | ---        | --- | 80 ± 10     | (8)  | 80     | 65 - 91      | ---         | ---  | ---         | ---  | ---         | --- | ---        | --- | 81 ± 11       | (6) | ISE   | 71   | (1)    | IC    |       |

TABLE 1632-1: COMPILED DATA FOR NBS SRM 1632 TRACE ELEMENTS IN COAL (cont.)

| ELE  | UNITS | NBS        | CONSENSUS        | MEDIAN | RANGE         | AA             |                  | NAA            |                | ICPES                 |                | XRF       |     | OTHER METHODS |     |
|------|-------|------------|------------------|--------|---------------|----------------|------------------|----------------|----------------|-----------------------|----------------|-----------|-----|---------------|-----|
|      |       |            |                  |        |               | Mean ± SD      | (n)              | Mean ± SD      | (n)            | Mean ± SD             | (n)            | Mean ± SD | (n) | Mean ± SD     | (n) |
| Fe   | ug/g  | 8700 ± 300 | 8510 ± 440 (47)  | 844.0  | 7517 - 9300   | 8700 ± 370 (4) | 8560 ± 470 (27)  | 8300 ± 400 (8) | 7900 ± 700 (6) | 8695 (2) PAA          | 8600 (1) POL   |           |     |               |     |
| Fe   | ug/g  | ---        | ---              | ---    | ---           | ---            | ---              | ---            | ---            | 8420 (1) TCGS         | ---            |           |     |               |     |
| Ga   | ug/g  | ---        | 5.9 ± 1.1 (18)   | 5.8    | 4.5 - 8.5     | ---            | 5.5 ± 0.8 (13)   | ---            | 7.1 ± 1.3 (4)  | 6.2 (1) OES           | ---            |           |     |               |     |
| Gd   | ug/g  | ---        | 2.5 ± 0.9 (10)   | 2.5    | 1.2 - 3.62    | 1.2 (1)        | 3.2 ± 0.5 (5)    | 1.2 (1)        | 3 (1)          | 1.82 (2) TCGS         | ---            |           |     |               |     |
| Ge   | ug/g  | ---        | 2.6 ± 0.4 (6)    | 2.7    | 2 - 3         | ---            | 2 (1)            | 2.3 (1)        | 3.6 ± 1.2 (3)  | 2.7 (1) OES           | ---            |           |     |               |     |
| H    | %     | ---        | 4.29 ± 0.22 (4)  | 4.28   | 4.02 - 4.57   | ---            | ---              | ---            | ---            | 4.42 (2) CB           | 4.16 (2) TCGS  |           |     |               |     |
| H2O- | %     | ---        | 2.6 (1)          | ---    | ---           | ---            | ---              | ---            | ---            | 2.6 (1) FD            | ---            |           |     |               |     |
| Hf   | ug/g  | ---        | 0.98 ± 0.10 (21) | 0.96   | 0.81 - 1.15   | ---            | 0.98 ± 0.10 (21) | ---            | ---            | ---                   | ---            |           |     |               |     |
| Hg   | ng/g  | 120 ± 20   | 118 ± 24 (22)    | 117    | 70 - 180      | 118 ± 14 (8)   | 150 ± 50 (13)    | ---            | ---            | 100 (3) PAA           | ---            |           |     |               |     |
| Ho   | ng/g  | ---        | 252 ± 13 (5)     | 250    | 240 - 270     | 250 (1)        | 252 ± 15 (4)     | ---            | ---            | ---                   | ---            |           |     |               |     |
| I    | ug/g  | ---        | 3.2 ± 0.4 (12)   | 3.3    | 2.68 - 4      | ---            | 3.4 ± 1.1 (10)   | ---            | 3 (1)          | 3.3 (2) PAA           | ---            |           |     |               |     |
| In   | ng/g  | ---        | 35 ± 21 (7)      | 30     | 16.9 - 70     | ---            | 35 ± 21 (7)      | ---            | ---            | ---                   | ---            |           |     |               |     |
| Ir   | ng/g  | ---        | 2.8 ± 0.6 (3)    | 2.5    | 2.48 - 3.53   | ---            | 2.8 ± 0.6 (3)    | ---            | ---            | ---                   | ---            |           |     |               |     |
| K    | ug/g  | ---        | 2780 ± 170 (39)  | 2800   | 2410 - 3100   | 2570 (1)       | 2830 ± 130 (25)  | 2675 ± 190 (8) | 2410 (1)       | 2700 (1) PAA          | 3100 (1) OES   |           |     |               |     |
| K    | ug/g  | ---        | ---              | ---    | ---           | ---            | ---              | ---            | ---            | 2750 (1) TCGS         | 2840 (1) GAMMA |           |     |               |     |
| La   | ug/g  | ---        | 10.6 ± 0.7 (31)  | 10.6   | 9.1 - 11.5    | 10 (1)         | 10.6 ± 0.6 (26)  | 10.35 (2)      | 10 (1)         | 11 (1) OES            | ---            |           |     |               |     |
| Li   | ug/g  | ---        | 25.9 ± 2.5 (3)   | 25     | 24 - 28.7     | 25 (1)         | ---              | 28.7 (1)       | ---            | 24 (1) OES            | ---            |           |     |               |     |
| Lu   | ng/g  | ---        | 129 ± 16 (15)    | 130    | 100 - 150     | 100 (1)        | 134 ± 12 (13)    | ---            | ---            | ---                   | ---            |           |     |               |     |
| Hg   | ug/g  | ---        | 1560 ± 410 (26)  | 1600   | 980 - 2480    | ---            | 1760 ± 490 (16)  | 1260 ± 180 (8) | ---            | 1600 (2) PAA          | 1600 (1) OES   |           |     |               |     |
| Mn   | ug/g  | 40 ± 3     | 41.1 ± 2.6 (50)  | 41.1   | 36 - 46       | 40 ± 3 (7)     | 41.8 ± 2.2 (29)  | 41.8 ± 2.9 (6) | 37.8 ± 1.1 (5) | 45.0 (2) PAA          | 36 (1) OES     |           |     |               |     |
| Mn   | ug/g  | ---        | ---              | ---    | ---           | ---            | ---              | ---            | ---            | ---                   | 43.5 (1) TCGS  |           |     |               |     |
| Mo   | ug/g  | ---        | 3.8 ± 0.8 (10)   | 3.4    | 3.08 - 5      | ---            | 3.8 ± 0.9 (6)    | 4 (2)          | 4 (1)          | 0.26 ± 0.05 (5) PAA   | 3.6 (1) OES    |           |     |               |     |
| N    | %     | ---        | 1.20 ± 0.14 (4)  | 1.2    | 1.01 - 1.3    | ---            | ---              | ---            | ---            | 1.3 (1) CB            | 1.25 (2) TCGS  |           |     |               |     |
| N    | %     | ---        | ---              | ---    | ---           | ---            | ---              | ---            | ---            | 1.01 (1) IC           | ---            |           |     |               |     |
| Na   | ug/g  | ---        | 379 ± 29 (39)    | 380    | 325 - 439     | 480 (1)        | 384 ± 24 (27)    | 374 ± 41 (8)   | 390 (1)        | 350 (2) PAA           | ---            |           |     |               |     |
| Nb   | ug/g  | ---        | 5 (1)            | ---    | ---           | ---            | ---              | ---            | 5 (1)          | ---                   | ---            |           |     |               |     |
| Nd   | ug/g  | ---        | 9.0 ± 1.6 (9)    | 9.5    | 6.4 - 11.3    | 8 (1)          | 9.1 ± 1.6 (5)    | 9.5 (1)        | 7 (1)          | 11.3 (1) TCGS         | ---            |           |     |               |     |
| Ni   | ug/g  | 15 ± 1     | 15 ± 2 (41)      | 14.8   | 11 - 19       | 14.6 ± 1.5 (6) | 16 ± 3 (15)      | 15.2 ± 2.5 (6) | 14.2 ± 2.4 (6) | 13.9 ± 0.2 (5) PAA    | 15 (1) OES     |           |     |               |     |
| Ni   | ug/g  | ---        | ---              | ---    | ---           | ---            | ---              | ---            | ---            | 14.73 ± 0.06 (3) IDMS | 14.8 (1) POL   |           |     |               |     |
| Ni   | ug/g  | ---        | ---              | ---    | ---           | ---            | ---              | ---            | ---            | 15.2 (2) SSMS         | 10.08 (1) CALC |           |     |               |     |
| O    | %     | ---        | 12.6 (2)         | ---    | 10.08 - 15.05 | ---            | ---              | ---            | ---            | 15.05 (1) 14NAA       | ---            |           |     |               |     |
| Os   | ug/g  | ---        | < 1              | ---    | ---           | ---            | < 1              | ---            | ---            | ---                   | ---            |           |     |               |     |

TABLE 1632-1: COMPILED DATA FOR NBS SRM 1632 TRACE ELEMENTS IN COAL (cont.)

| ELE | UNITS | NBS       |      | MEDIAN | RANGE       | AA         |      | NAA         |      | ICPES       |     | XRF         |     | OTHER METHODS |           |
|-----|-------|-----------|------|--------|-------------|------------|------|-------------|------|-------------|-----|-------------|-----|---------------|-----------|
|     |       | Mean ± SD | (n)  |        |             | Mean ± SD  | (n)  | Mean ± SD   | (n)  | Mean ± SD   | (n) | Mean ± SD   | (n) | Method        | (n)       |
| P   | ug/g  | ---       |      | 137    | 92 - 250    | ---        |      | ---         |      | 125 ± 24    | (7) | 138         | (1) | 260           | (2) COLOR |
| Pb  | ug/g  | 30 ± 9    | (34) | 28     | 19.1 - 36   | 29 ± 3     | (11) | ---         |      | 24 ± 8      | (6) | 24 ± 8      | (5) | 30 ± 2        | (7) PAA   |
| Pb  | ug/g  | ---       |      | ---    | ---         | ---        |      | ---         |      | ---         |     | ---         |     | 30 ± 3        | (3) SSMS  |
| Pd  | ng/g  | ---       |      | ---    | ---         | ---        |      | < 5         |      | ---         |     | ---         |     | ---           |           |
| Pr  | ug/g  | ---       |      | 3.6    | 2 - 4.9     | ---        |      | 4.4 ± 0.7   | (3)  | ---         |     | 2           | (1) | ---           |           |
| Pt  | ng/g  | ---       |      | ---    | 186 - 270   | ---        |      | 228         | (2)  | ---         |     | ---         |     | ---           |           |
| Rb  | ug/g  | ---       |      | 20     | 16.3 - 24.7 | ---        |      | 20.5 ± 2.3  | (23) | ---         |     | 20 ± 3      | (4) | 20            | (2) PAA   |
| Rh  | ug/g  | ---       |      | ---    | ---         | ---        |      | ---         |      | ---         |     | ---         |     | < 5           |           |
| Ru  | ng/g  | ---       |      | ---    | ---         | ---        |      | 18          | (1)  | ---         |     | ---         |     | ---           |           |
| S   | %     | ---       |      | 1.32   | 1.22 - 1.52 | ---        |      | ---         |      | 0.9         | (1) | 1.35 ± 0.12 | (4) | 1.30          | (2) TCGS  |
| S   | %     | ---       |      | ---    | ---         | ---        |      | ---         |      | ---         |     | ---         |     | 1.22 ± 0.21   | (4) CB    |
| Sb  | ug/g  | ---       |      | 3.4    | 2.2 - 4.45  | 3.3 ± 1.3  | (3)  | 3.4 ± 0.5   | (29) | ---         |     | 3           | (1) | 3.6 ± 0.5     | (3) PAA   |
| Sc  | ug/g  | ---       |      | 3.8    | 3.4 - 4.2   | ---        |      | 3.8 ± 0.2   | (24) | 3.8         | (2) | 4.1         | (1) | 3.59          | (2) PAA   |
| Se  | ug/g  | 2.9 ± 0.3 | (50) | 3      | 2.3 - 3.9   | 2.3        | (2)  | 3.1 ± 0.4   | (32) | 2.9         | (1) | 3.02 ± 0.10 | (4) | 3.01 ± 0.01   | (5) PAA   |
| Se  | ug/g  | ---       |      | ---    | ---         | ---        |      | ---         |      | ---         |     | ---         |     | ---           |           |
| Se  | ug/g  | ---       |      | ---    | ---         | ---        |      | ---         |      | ---         |     | ---         |     | 3.05          | (1) ASV   |
| Se  | ug/g  | ---       |      | ---    | ---         | ---        |      | ---         |      | ---         |     | ---         |     | 2.75          | (2) SSMS  |
| Si  | %     | 3.2       | (12) | 3.14   | 2.6 - 3.5   | 2.9        | (2)  | 3.12        | (1)  | 3.08 ± 0.22 | (5) | 3.19        | (1) | 3.00          | (1) PAA   |
| Si  | %     | ---       |      | ---    | ---         | ---        |      | ---         |      | ---         |     | ---         |     | ---           |           |
| Sm  | ug/g  | ---       |      | 1.66   | 1.3 - 1.93  | 1.4        | (1)  | 1.64 ± 0.18 | (23) | 1.3         | (1) | ---         |     | 1.53          | (1) TCGS  |
| Sn  | ug/g  | ---       |      | 10     | 5 - 11      | ---        |      | 10          | (1)  | 7.2 ± 2.9   | (3) | 5           | (1) | 10.2 ± 0.4    | (5) PAA   |
| Sr  | ug/g  | ---       |      | 150    | 99 - 190    | 99         | (1)  | 146 ± 28    | (26) | 139 ± 3     | (3) | 146 ± 10    | (6) | 140           | (1) PAA   |
| Ta  | ng/g  | ---       |      | 240    | 170 - 350   | ---        |      | 250 ± 40    | (18) | ---         |     | ---         |     | ---           |           |
| Tb  | ng/g  | ---       |      | 260    | 200 - 400   | ---        |      | 280 ± 70    | (12) | ---         |     | ---         |     | ---           |           |
| Te  | ng/g  | < 100     |      | 600    | 500 - 1020  | 500        | (1)  | 600         | (1)  | ---         |     | ---         |     | 1020          | (1) PAA   |
| Th  | ug/g  | 3         | (24) | 3.2    | 2.7 - 3.65  | ---        |      | 3.16 ± 0.21 | (20) | ---         |     | 2.85        | (2) | 3.45          | (2) GAMMA |
| Ti  | ug/g  | 800       | (39) | 946    | 680 - 1200  | 840 ± 170  | (3)  | 990 ± 115   | (19) | 920 ± 60    | (7) | 1000 ± 240  | (5) | 920 ± 45      | (3) PAA   |
| Ti  | ug/g  | ---       |      | ---    | ---         | ---        |      | ---         |      | ---         |     | ---         |     | 890           | (1) TCGS  |
| Tl  | ng/g  | 590 ± 30  | (8)  | 520    | 500 - 610   | ---        |      | ---         |      | ---         |     | ---         |     | 530 ± 40      | (5) PAA   |
| Tm  | ng/g  | ---       |      | 300    | 300 - 300   | ---        |      | 300 ± 1     | (4)  | ---         |     | ---         |     | ---           |           |
| U   | ug/g  | 1.4 ± 0.1 | (32) | 1.4    | 1.1 - 1.6   | ---        |      | 1.37 ± 0.14 | (23) | ---         |     | 2           | (1) | 1.42 ± 0.13   | (5) PAA   |
| U   | ug/g  | ---       |      | ---    | ---         | ---        |      | ---         |      | ---         |     | ---         |     | ---           |           |
| V   | ug/g  | 35 ± 3    | (41) | 34     | 30 - 40     | 35 ± 2     | (7)  | 34.5 ± 2.2  | (23) | 33.8 ± 2.3  | (6) | ---         |     | 34            | (2) PAA   |
| W   | ng/g  | ---       |      | 740    | 630 - 870   | ---        |      | 740 ± 60    | (11) | ---         |     | ---         |     | ---           |           |
| Y   | ug/g  | ---       |      | 7.4    | 6.6 - 8.3   | 7          | (1)  | ---         |      | 7.45        | (2) | 7.4 ± 0.4   | (3) | 7.8           | (2) OES   |
| Yb  | ng/g  | ---       |      | 790    | 550 - 1030  | 700        | (1)  | 800 ± 130   | (20) | 670         | (1) | ---         |     | 910           | (1) OES   |
| Zn  | ug/g  | 37 ± 4    | (52) | 37     | 30 - 45     | 37.3 ± 1.8 | (9)  | 36 ± 3      | (20) | 38.8 ± 1.6  | (5) | 35.8 ± 2.3  | (8) | 37.6 ± 1.2    | (6) PAA   |
| Zn  | ug/g  | ---       |      | ---    | ---         | ---        |      | ---         |      | ---         |     | ---         |     | 35            | (2) SSMS  |
| Zr  | ug/g  | ---       |      | 33     | 16 - 46     | 46         | (1)  | 38 ± 7      | (4)  | 25          | (1) | 36          | (2) | 16            | (1) PAA   |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Al (%) cont.</u> |       |     |        |           |
| <                | 100   |     | ITNA   | 75RUC 01  | 1.98                | 0.1   |     | XRF    | 79PRA 01  |
| <                | 140   | L   | ITNA   | 77MAE 01  | 2.1                 | 1.05  |     | OES    | 76WEW 01  |
| <                | 150   | L   | OES    | 76WEW 01  | 2.21                |       |     | ITNA   | 77GLU 01  |
| <                | 200   | L   | ITNA   | 77CAH 01  | 3                   | 0.1   |     | ITNA   | 82SUZ 02  |
| <                | 200   | L   | ICPES  | 81CHU 01  |                     |       |     |        |           |
| <                | 220   | L   | ITNA   | 82SUZ 02  |                     |       |     |        |           |
| <                | 400   | L   | PAA    | 76CHA 01  |                     |       |     |        |           |
| 45               | 5     |     | RTNA   | 77NAD 02  | 3                   | 2     |     | EXRF   | 73SPA 01  |
| 60               | 30    |     | ITNA   | 75OND 01  | 4.5                 | 0.4   |     | ITNA   | 75RIC 01  |
| 60               | 30    |     | ITNA   | 73ABE 01  | 4.6                 | 0.3   |     | ITNA   | 78NAD 02  |
| 70               | 34    |     | SSMS   | 77PAU 01  | 4.61                | 0.32  |     | ITNA   | 75NAD 02  |
| 80               |       |     | AA     | 76WEW 01  | 4.7                 | 0.5   |     | ITNA   | 78MAC 01  |
| 1050             | 100   |     | PAA    | 74CHA 01  | 4.7                 | 1     |     | EXRF   | 79GIA 01  |
|                  |       |     |        |           | 5                   | 0.6   | H   | OES    | 80CLA 01  |
|                  |       |     |        |           | 5.1                 | 0.5   |     | ITNA   | 76KUC 01  |
|                  |       |     |        |           | 5.31                |       |     | ICPES  | 81NAD 01  |
|                  |       |     |        |           | 5.4                 | 0.1   |     | IENA   | 78WAN 01  |
|                  |       |     |        |           | 5.4                 | 0.3   |     | FAE    | 80DSI 01  |
|                  |       |     |        |           | 5.4                 | 0.5   |     | COLOR  | 77ARU 01  |
|                  |       |     |        |           | 5.5                 |       |     | ITNA   | 75KLE 01  |
|                  |       |     |        |           | 5.58                | 0.73  |     | FAA    | 82BEN 01  |
|                  |       |     |        |           | 5.6                 |       |     | FAA    | 78GUI 01  |
|                  |       |     |        |           | 5.6                 | 0.2   |     | ITNA   | 77ARU 01  |
|                  |       |     |        |           | 5.6                 | 0.36  |     | FAA    | 77ARU 01  |
|                  |       |     |        |           | 5.7                 |       |     | ITNA   | 77GLU 01  |
|                  |       |     |        |           | 5.7                 |       |     | FAA    | 75POL 01  |
|                  |       |     |        |           | 5.7                 |       |     | ITNA   | 78WEA 01  |
|                  |       |     |        |           | 5.7                 | 0.13  |     | RTNA   | 75RUC 01  |
|                  |       |     |        |           | 5.7                 | 0.2   | H   | FAE    | 79FEL 01  |
|                  |       |     |        |           | 5.7                 | 0.2   |     | FAA    | 78HAY 01  |
|                  |       |     |        |           | 5.7                 | 0.5   |     | ITNA   | 79FRU 01  |
|                  |       |     |        |           | 5.7                 | 0.5   |     | ITNA   | 73ABE 01  |
|                  |       |     |        |           | 5.75                | 0.37  |     | PAA    | 74CHA 01  |
|                  |       |     |        |           | 5.8                 | 0.3   |     | PAA    | 76CHA 01  |
|                  |       |     |        |           | 5.8                 | 0.3   |     | ITNA   | 76RAG 01  |
|                  |       |     |        |           | 5.8                 | 0.3   |     | ITNA   | 77MAE 01  |
|                  |       |     |        |           | 5.8                 | 0.3   |     | PAA    | 77JER 01  |
|                  |       |     |        |           | 5.8                 | 0.4   |     | RTNA   | 74ORV 01  |
|                  |       |     |        |           | 5.8                 | 0.5   |     | ITNA   | 76BLO 01  |
|                  |       |     |        |           | 5.9                 | 0.3   |     | ITNA   | 79GRE 01  |
|                  |       |     |        |           | 5.9                 | 0.4   |     | ITNA   | 81WAN 01  |
|                  |       |     |        |           | 5.9                 | 0.5   |     | ITNA   | 73SHE 01  |
|                  |       |     |        |           | 6.0                 | 0.3   |     | ITNA   | 78LAU 02  |
|                  |       |     |        |           | 6.1                 | 0.3   |     | GCMES  | 75TAL 01  |
|                  |       |     |        |           | 6.1                 | 0.4   |     | ITNA   | 77ROW 04  |
|                  |       |     |        |           | 6.1                 | 0.5   |     | XRF    | 79FRU 01  |
|                  |       |     |        |           | 6.1                 | 0.55  |     | ITNA   | 77JER 01  |
|                  |       |     |        |           | 6.1                 | 1.4   |     | ITNA   | 75OND 01  |
|                  |       |     |        |           | 6.2                 | 0.8   | 6   | PAA    | 82SEG 01  |
|                  |       |     |        |           | 6.2                 | 1.3   |     | ITNA   | 77CAH 01  |
|                  |       |     |        |           | 6.27                | 0.89  |     | RTNA   | 77JER 01  |
|                  |       |     |        |           |                     |       |     |        |           |
| <u>Al (%)</u>    |       |     |        |           |                     |       |     |        |           |
| 1.51             | 0.08  |     | NAA    | 76HAN 01  |                     |       |     |        |           |
| 1.57             |       | 4   | AA     | 79REI 01  |                     |       |     |        |           |
| 1.57             | 0.155 |     | ITNA   | 73SHE 01  |                     |       |     |        |           |
| 1.59             | 0.2   |     | ITNA   | 76RAG 01  |                     |       |     |        |           |
| 1.6              |       |     | ICPES  | 80NAD 01  |                     |       |     |        |           |
| 1.6              | 0.2   | 35  | ITNA   | 81GLA 03  |                     |       |     |        |           |
| 1.62             | 0.13  |     | ITNA   | 78MAC 01  |                     |       |     |        |           |
| 1.64             |       |     | ICPES  | 80NAD 01  |                     |       |     |        |           |
| 1.66             |       |     | ICPES  | 80NAD 01  |                     |       |     |        |           |
| 1.66             | 0.08  |     | ICPES  | 84NAD 01  |                     |       |     |        |           |
| 1.67             | 0.01  | 11  | ICPES  | 85HAR 01  |                     |       |     |        |           |
| 1.68             | 0.01  |     | ITNA   | 83NDI 01  |                     |       |     |        |           |
| 1.68             | 0.04  | D   | TCGS   | 80AND 01  |                     |       |     |        |           |
| 1.68             | 0.04  |     | TCGS   | 79FAI 01  |                     |       |     |        |           |
| 1.69             |       | 11  | ICPES  | 85HAR 01  |                     |       |     |        |           |
| 1.71             | 0.05  |     | ITNA   | 77MAE 01  |                     |       |     |        |           |
| 1.71             | 0.07  |     | ITNA   | 78LAU 02  |                     |       |     |        |           |
| 1.72             | 0.09  |     | ITNA   | 75RIC 01  |                     |       |     |        |           |
| 1.73             | 0.04  |     | ITNA   | 76BLO 01  |                     |       |     |        |           |
| 1.74             | 0.04  |     | ITNA   | 77ROW 03  |                     |       |     |        |           |
| 1.74             | 0.04  | D   | NAA    | 79STE 01  |                     |       |     |        |           |
| 1.74             | 0.4   |     | ITNA   | 76STE 05  |                     |       |     |        |           |
| 1.76             | 0.31  |     | ITNA   | 78NAD 02  |                     |       |     |        |           |
| 1.76             | 0.31  |     | ITNA   | 75NAD 02  |                     |       |     |        |           |
| 1.78             | 0.08  |     | ITNA   | 73ABE 01  |                     |       |     |        |           |
| 1.8              |       |     | ITNA   | 84CLE 01  |                     |       |     |        |           |
| 1.8              | 0.18  |     | ITNA   | 76WEW 01  |                     |       |     |        |           |
| 1.82             | 0.06  |     | ICPES  | 81CHU 01  |                     |       |     |        |           |
| 1.85             |       |     | ITNA   | 78WEA 01  |                     |       |     |        |           |
| 1.85             | 0.08  |     | ITNA   | 79GRE 01  |                     |       |     |        |           |
| 1.85             | 0.13  |     | ITNA   | 75OND 01  |                     |       |     |        |           |
| 1.85             | 0.13  |     | FAA    | 77PIL 01  |                     |       |     |        |           |
| 1.86             |       |     | ICPES  | 80NAD 01  |                     |       |     |        |           |
| 1.9              |       |     | ITNA   | 75KLE 01  |                     |       |     |        |           |
| 1.9              | 0.19  |     | ITNA   | 81WAN 01  |                     |       |     |        |           |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>As (ug/g) cont.</u> |       |     |        |           | <u>Ba (ug/g)</u> |       |     |        |           |
| 6.3                    | 0.2   |     | IENA   | 77ROW 04  | 87               | 5     | 9   | ITNA   | 82SUZ 02  |
| 6.3                    | 0.2   | D   | NAA    | 79STE 01  | 104              | 5     | 9   | ITNA   | 82SUZ 02  |
| 6.3                    | 0.3   |     | ITNA   | 85FIL 01  | 152              | 37    |     | ICPES  | 84NAD 01  |
| 6.3                    | 1     | 6   | PAA    | 82SEG 01  | 183              |       |     | ICPES  | 80NAD 01  |
| 6.3                    | 1     |     | PAA    | 80SEG 01  | 256              |       |     | ICPES  | 80NAD 01  |
| 6.4                    | 0.2   |     | IENA   | 77ROW 03  | 274              | 31    |     | ITNA   | 76STE 05  |
| 6.5                    | 0.3   |     | NAA    | 76HAN 01  | 280              |       |     | ITNA   | 75MIL 01  |
| 6.5                    | 0.5   |     | ICPES  | 80HAA 01  | 300              | 60    |     | ITNA   | 78LAU 02  |
| 6.5                    | 1.2   |     | IENA   | 76STE 05  | 301              |       | 34  | WXRF   | 82MIL 01  |
| 6.5                    | 1.4   | D   | NAA    | 74OND 01  | 302              | 8     |     | ITNA   | 76RAG 01  |
| 6.6                    |       | 34  | WXRF   | 82MIL 01  | 306              | 20    |     | IENA   | 77ROW 04  |
| 6.6                    | 1.3   |     | ITNA   | 76WEW 01  | 306              | 20    | D   | NAA    | 79STE 01  |
| 7                      |       |     | AA     | 76WEW 01  | 309              | 24    |     | ITNA   | 77ROW 04  |
| 8                      | 2     |     | PAA    | 75OND 01  | 310              |       | 11  | ICPES  | 85HAR 01  |
| 8.9                    | 0.2   |     | ITNA   | 82SUZ 02  | 310              |       | 35  | ITNA   | 81GLA 03  |
| 8.9                    | 0.5   |     | ITNA   | 75RUC 01  | 310              | 10    | 11  | ICPES  | 85HAR 01  |
|                        |       |     |        |           | 310              | 30    |     | ITNA   | 78MAC 01  |
|                        |       |     |        |           | 311              | 25    |     | ITNA   | 75NAD 02  |
|                        |       |     |        |           | 311              | 25    |     | ITNA   | 78NAD 02  |
|                        |       |     | CB     | 79PRA 01  | 314              | 20    |     | PAA    | 74CHA 01  |
| 12.17                  |       |     | CB     | 79PRA 01  | 314              | 43    |     | ITNA   | 81WAN 01  |
| 13.2                   |       | 34  | CB     | 82MIL 01  | 315              | 20    |     | PAA    | 76CHA 01  |
|                        |       |     |        |           | 320              | 20    |     | NAA    | 76HAN 01  |
|                        |       |     |        |           | 320              | 77    |     | ITNA   | 85FIL 01  |
| <                      | 1     | L   | ITNA   | 77CAH 01  | 322              | 20    |     | IENA   | 77ROW 03  |
| <                      | 20    |     | ITNA   | 75RUC 01  | 337              | 42    |     | ITNA   | 73SHE 01  |
| <                      | 30    | L   | ITNA   | 73ABE 01  | 338              | 13.8  |     | IENA   | 76STE 05  |
| <                      | 300   | L   | ICPES  | 81CHU 01  | 338              | 14    | D   | NAA    | 79STE 01  |
| 0.85                   | 0.03  |     | RTNA   | 77NAD 02  | 345              | 70    |     | ITNA   | 76WEW 01  |
| 0.99                   | 0.16  |     | RTNA   | 77NAD 01  | 350              |       |     | ITNA   | 78WEA 01  |
| 146                    | 48    |     | ITNA   | 73SHE 01  | 350              | 20    |     | ITNA   | 77MAE 01  |
| 200                    |       |     | ITNA   | 78WEA 01  | 350              | 30    |     | ITNA   | 79GRE 01  |
|                        |       |     |        |           | 352              | 30    |     | ITNA   | 75OND 01  |
|                        |       |     |        |           | 354              | 84    |     | ITNA   | 79ROS 03  |
|                        |       |     |        |           | 360              | 20    | 9   | ITNA   | 78LAU 02  |
| 29                     |       |     | ICPES  | 81NAD 01  | 366              | 34    |     | ITNA   | 75RUC 01  |
| 30                     | 1.1   |     | OES    | 76WEW 01  | 385              | 40    |     | ITNA   | 77CAH 01  |
| 42.1                   | 0.7   |     | TCGS   | 79FAI 01  | 390              | 20    |     | ITNA   | 73ABE 01  |
| 42.1                   | 0.7   | D   | TCGS   | 80AND 01  | 390              | 40    |     | ITNA   | 79FRU 01  |
| 43                     |       |     | VV     | 77GLU 01  | 405              |       |     | ITNA   | 75KLE 01  |
| 47                     | 1.6   | 6   | TCGS   | 76GLA 01  | 410              | 82    |     | OES    | 76WEW 01  |
| 47.7                   | 1.6   | 6   | TCGS   | 76GLA 01  |                  |       |     |        |           |
| 47.7                   | 1.8   | 6   | TCGS   | 76GLA 01  |                  |       |     |        |           |
| 118                    |       |     | ITNA   | 77GLU 01  |                  |       |     |        |           |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Be (ug/g)</u> |       |     |        |           | <u>Br (ug/g) cont.</u> |       |     |        |           |
| 1.1              | 0.47  |     | ICPES  | 84NAD 01  | 19                     | 4     |     | ITNA   | 75RIC 01  |
| 1.2              | 0.07  |     | OES    | 76WEW 01  | 19.2                   | 0.6   |     | ITNA   | 77ROW 04  |
| 1.24             |       |     | FAA    | 75POL 01  | 19.2                   | 1.2   |     | ITNA   | 77MAE 01  |
| 1.49             | 0.03  |     | FLUOR  | 77WIC 01  | 19.3                   |       |     | ITNA   | 78WEA 01  |
| 1.5              |       |     | AA     | 76WEW 01  | 19.3                   | 1.9   |     | ITNA   | 75OND 01  |
| 1.5              | 0.1   |     | FAA    | 75OWE 01  | 19.5                   | 0.3   |     | IENA   | 76STE 05  |
| 1.52             | 0.11  | 6   | FAA    | 77GLA 02  | 19.6                   | 0.4   | D   | NAA    | 79STE 01  |
| 1.56             | 0.07  | 11  | AA     | 82LIN 03  | 19.6                   | 0.4   | D   | IENA   | 77ROW 04  |
| 1.57             | 0.12  | 6   | FAA    | 77GLA 02  | 19.6                   | 0.4   |     | IENA   | 77ROW 03  |
| 1.63             | 0.05  | 11  | AA     | 82LIN 03  | 20                     |       |     | ITNA   | 77GLU 01  |
| 1.69             | 0.07  | 11  | AA     | 82LIN 03  | 20                     | 2     |     | ITNA   | 79GRE 01  |
| 1.7              |       | 4   | AA     | 79REI 01  | 20                     | 3     |     | ITNA   | 73SHE 01  |
| 1.7              |       |     | ITNA   | 77GLU 01  | 23.7                   | 3.2   |     | EXRF   | 73SPA 01  |
| 1.7              | 0.03  |     | ICPES  | 81CHU 01  | 38                     | 1     |     | ITNA   | 82SUZ 02  |
| 1.7              | 0.4   | 35  | FAA    | 76GLA 02  |                        |       |     |        |           |
| 1.77             |       |     | ICPES  | 80NAD 01  |                        |       |     |        |           |
| 1.85             |       |     | ICPES  | 80NAD 01  |                        |       |     |        |           |
| <u>Bi (ug/g)</u> |       |     |        |           | <u>C (%)</u>           |       |     |        |           |
|                  |       |     |        |           | 68.93                  | 0.11  |     | CB     | 80SCH 02  |
|                  |       |     |        |           | 69.6                   | 2.1   | 35  | CB     | 79GLA 04  |
|                  |       |     |        |           | 70                     | 5     | D   | TCGS   | 80AND 01  |
| <                | 1     | L   | WXRF   | 82MIL 01  | 70                     | 5     |     | TCGS   | 79FAI 01  |
| <                | 1     | L   | PAA    | 76CHA 01  | 71.7                   |       |     | CB     | 79PRA 01  |
| <                | 1     | L   | AA     | 76WEW 01  | 73                     | 3     | 35  | TCGS   | 79GLA 04  |
| <                | 1.5   | L   | OES    | 76WEW 01  |                        |       |     |        |           |
| 1.05             |       |     | PAA    | 74CHA 01  |                        |       |     |        |           |
| <u>Br (ug/g)</u> |       |     |        |           | <u>Ca (ug/g)</u>       |       |     |        |           |
|                  |       |     |        |           | 2400                   | 600   |     | ITNA   | 82SUZ 02  |
|                  |       |     |        |           | 2840                   | 80    |     | GAMMA  | 75OND 01  |
| 7.8              | 5.8   |     | ITNA   | 81WAN 01  | 3300                   | 500   | D   | TCGS   | 80AND 01  |
| 14               | 2     |     | ITNA   | 76STE 05  | 3300                   | 500   |     | TCGS   | 79FAI 01  |
| 14.2             |       |     | ITNA   | 75KLE 01  | 3500                   | 300   | D   | NAA    | 79STE 01  |
| 15               | 1     |     | ITNA   | 78MAC 01  | 3500                   | 300   |     | ITNA   | 76STE 05  |
| 15.2             | 1.4   |     | ITNA   | 75NAD 02  | 3500                   | 2800  |     | ITNA   | 77ROW 03  |
| 15.2             | 1.4   |     | ITNA   | 78NAD 02  | 3600                   |       |     | ITNA   | 84CLE 01  |
| 15.6             | 0.4   |     | ITNA   | 85GAU 04  | 3700                   | 400   |     | NAA    | 76HAN 01  |
| 16.2             | 1     | 5   | IENA   | 79GLA 02  | 3890                   | 40    | 11  | ICPES  | 85HAR 01  |
| 16.6             | 0.6   |     | NAA    | 76HAN 01  | 3940                   |       | 11  | ICPES  | 85HAR 01  |
| 17               | 1     |     | ITNA   | 78LAU 02  | 4000                   |       |     | ICPES  | 80NAD 01  |
| 17               | 2     |     | ITNA   | 79FRU 01  | 4030                   | 480   |     | 14NAA  | 77VAN 01  |
| 17               | 2     |     | ITNA   | 73ABE 01  | 4070                   | 560   |     | ITNA   | 73SHE 01  |
| 17               | 2     |     | XRF    | 79FRU 01  | 4100                   | 400   |     | ITNA   | 79GRE 01  |
| 17.2             |       |     | ITNA   | 76RAG 01  | 4100                   | 500   |     | ITNA   | 81WAN 01  |
| 17.4             | 1.1   |     | IENA   | 84GLA 02  | 4140                   | 140   |     | ICPES  | 81CHU 01  |
| 17.5             | 0.3   |     | EXRF   | 79GIA 01  | 4200                   |       |     | ICPES  | 80NAD 01  |
| 17.9             | 0.3   | 5   | IENA   | 79GLA 02  | 4200                   | 300   |     | ITNA   | 77MAE 01  |
| 18               |       | 34  | WXRF   | 82MIL 01  | 4200                   | 400   |     | PAA    | 76CHA 01  |
| 18               | 2     |     | ITNA   | 76KUC 01  | 4200                   | 500   |     | XRF    | 79FRU 01  |
| 18.2             | 2.3   |     | ITNA   | 75RUC 01  | 4200                   | 500   |     | ITNA   | 75OND 01  |
| 18.8             | 0.9   |     | ITNA   | 83NDI 01  | 4200                   | 600   |     | ITNA   | 76RAG 01  |
| 18.8             | 2.4   |     | ITNA   | 77CAH 01  | 4300                   | 200   |     | ITNA   | 78NAD 02  |
| 19               | 1     |     | XRF    | 79PRA 01  | 4300                   | 200   |     | ITNA   | 75NAD 02  |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ca (ug/g) cont.</u> |       |     |        |           | <u>Ce (ug/g)</u> |       |     |        |           |
| 4400                   |       |     | ITNA   | 75KLE 01  | 17.34            | 0.089 |     | ITNA   | 73SHE 01  |
| 4400                   | 100   |     | ICPES  | 84NAD 01  | 18.5             |       |     | ITNA   | 75KLE 01  |
| 4400                   | 900   |     | ITNA   | 76WEW 01  | 18.8             | 1     |     | ITNA   | 76RAG 01  |
| 4420                   | 120   |     | XRF    | 79PRA 01  | 19               | 0.7   |     | ITNA   | 85FIL 01  |
| 4500                   |       |     | ICPES  | 80NAD 01  | 19               | 1     |     | ITNA   | 78LAU 02  |
| 4700                   | 600   |     | PAA    | 75OND 01  | 19.5             | 0.7   | D   | ITNA   | 77ROW 04  |
| 4950                   |       | 4   | AA     | 79REI 01  | 19.5             | 0.7   |     | ITNA   | 77ROW 03  |
| 5000                   |       |     | ICPES  | 80NAD 01  | 19.5             | 0.7   |     | ITNA   | 77MAE 01  |
| 5100                   | 1000  |     | OES    | 76WEW 01  | 19.5             | 0.7   | D   | NAA    | 79STE 01  |
| 5300                   |       | 35  | ITNA   | 81GLA 03  | 19.5             | 1     |     | ITNA   | 75OND 01  |
| 7000                   |       |     | ITNA   | 77GLU 01  | 19.7             | 0.2   |     | ITNA   | 76WEW 01  |
|                        |       |     |        |           | 19.7             | 0.56  |     | ITNA   | 75NAD 02  |
|                        |       |     |        |           | 19.7             | 0.6   |     | ITNA   | 78NAD 02  |
|                        |       |     |        |           | 20               |       |     | ITNA   | 75MIL 01  |
|                        |       |     |        |           | 20               | 1.2   |     | PAA    | 76CHA 01  |
| 170                    | 6     | 7   | FAA    | 85FUD 01  | 20               | 3.7   |     | ITNA   | 77CAH 01  |
| 170                    | 36    |     | SSMS   | 77PAU 01  | 20.1             | 0.3   |     | ITNA   | 84ODD 01  |
| 180                    | 10    |     | AF     | 75EPS 01  | 20.4             | 0.2   |     | RTNA   | 84ODD 01  |
| 180                    | 14    |     | AF     | 74RAI 01  | 20.6             | 1     |     | ITNA   | 79GRE 01  |
| 180                    | 20    | D   | TCGS   | 80AND 01  | 21               | 3.5   |     | ITNA   | 81WAN 01  |
| 180                    | 20    |     | TCGS   | 79FAI 01  | 21.2             | 1.7   |     | NAA    | 76HAN 01  |
| 180                    | 40    | 6   | PAA    | 82SEG 01  | 21.5             | 1.8   |     | ITNA   | 83NDI 01  |
| 190                    |       |     | POL    | 74MAI 01  | 21.5             | 2.2   |     | IENA   | 77ROW 04  |
| 190                    | 2     | 7   | FAA    | 85FUD 01  | 22.6             | 0.5   |     | ICPES  | 81CHU 01  |
| 199                    | 20    |     | PAA    | 74CHA 01  | 22.8             |       |     | OES    | 82GUP 02  |
| 200                    | 20    |     | RTNA   | 77JER 01  | 23               | 2.7   |     | ITNA   | 75RUC 01  |
| 200                    | 20    |     | PAA    | 77JER 01  | 23.3             |       |     |        |           |
| 200                    | 20    |     | PAA    | 76CHA 01  | 24               |       | 34  | WXRF   | 82MIL 01  |
| 200                    | 50    | 6   | TCGS   | 76GLA 01  | 26               | 5     |     | ITNA   | 78MAC 01  |
| 200                    | 100   | 6   | PAA    | 82SEG 01  | 29               | 1     | 12  | ITNA   | 82SUZ 02  |
| 210                    | 10    |     | FAA    | 77GLU 01  | 29               | 1     | 12  | ITNA   | 82SUZ 02  |
| 210                    | 20    |     | FAA    | 74RAI 01  | 30               | 15    |     | OES    | 76WEW 01  |
| 230                    | 10    | 7   | AA     | 73TAL 01  |                  |       |     |        |           |
| 230                    | 10    |     | FAA    | 74TAL 01  |                  |       |     |        |           |
| 230                    | 20    |     | RTNA   | 74ORV 01  |                  |       |     |        |           |
| 230                    | 20    |     | RTNA   | 84DEL 01  | 80               | 20    |     | ITNA   | 73ABE 01  |
| 230                    | 21    | 8   | SSMS   | 80KOP 01  | 750              | 75    |     | ITNA   | 73SHE 01  |
| 240                    | 30    |     | FAA    | 74TAL 01  | 760              |       | 35  | ITNA   | 81GLA 03  |
| 240                    | 30    | 7   | AA     | 73TAL 01  | 800              | 50    |     | ITNA   | 78MAC 01  |
| 250                    |       |     | FAA    | 78GUI 01  | 810              |       | 34  | WXRF   | 82MIL 01  |
| 250                    |       |     | FAA    | 75POL 01  | 810              | 30    |     | ITNA   | 82SUZ 02  |
| 250                    | 70    |     | PAA    | 80SEG 01  | 811              | 5     |     | XRF    | 79PRA 01  |
| 310                    |       |     | IDMS   | 75KLE 01  | 817              | 96    |     | ITNA   | 81WAN 01  |
| 310                    |       |     | AA     | 76WEW 01  | 828              | 22    |     | ITNA   | 76RAG 01  |
| 400                    | 200   |     | SSMS   | 77DON 01  | 844              | 37    |     | ITNA   | 77ROW 03  |
| 700                    | 350   |     | OES    | 76WEW 01  | 844              | 37    |     | ITNA   | 76STE 05  |
|                        |       |     |        |           | 844              | 37    | D   | NAA    | 79STE 01  |
|                        |       |     |        |           | 846              | 44    |     | ITNA   | 75RUC 01  |
|                        |       |     |        |           | 850              | 40    |     | IC     | 85GEN 01  |
|                        |       |     |        |           | 850              | 150   |     | ITNA   | 79FRU 01  |
|                        |       |     |        |           | 860              | 54    |     | ITNA   | 77CAH 01  |
|                        |       |     |        |           | 866              | 40    |     | ITNA   | 75RIC 01  |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cl (ug/g) cont.</u> |       |     |        |           | <u>Co (ug/g) cont.</u> |       |     |        |           |
| 880                    |       |     | ITNA   | 84GLA 02  | 5.8                    | 0.6   |     | ITNA   | 85FIL 01  |
| 890                    |       |     | ITNA   | 78WEA 01  | 5.9                    |       |     | ITNA   | 75KLE 01  |
| 890                    | 50    |     | ITNA   | 79GRE 01  | 5.9                    | 0.5   |     | AA     | 79ROS 03  |
| 890                    | 100   |     | PAA    | 76CHA 01  | 6                      | 0.02  |     | ITNA   | 78MAC 01  |
| 890                    | 125   |     | ITNA   | 75OND 01  | 6                      | 0.2   |     | ITNA   | 79GRE 01  |
| 895                    | 15    | D   | TCGS   | 80AND 01  | 6.01                   | 0.16  |     | ITNA   | 77ROW 04  |
| 895                    | 15    |     | TCGS   | 79FAI 01  | 6.1                    | 0.1   |     | ITNA   | 77MAE 01  |
| 915                    |       |     | ISE    | 81NAD 01  | 6.2                    |       |     | ITNA   | 75MIL 01  |
| 915                    |       |     | IC     | 83NAD 01  | 6.39                   | 0.74  |     | ITNA   | 81WAN 01  |
| 920                    | 30    |     | NAA    | 76HAN 01  | 6.5                    | 0.2   |     | ITNA   | 82SUZ 02  |
| 930                    |       |     | ISE    | 83NAD 01  | 6.57                   | 0.47  |     | NAA    | 76HAN 01  |
| 930                    | 48    |     | PAA    | 74CHA 01  | 6.6                    |       |     | ITNA   | 84CLE 01  |
| 945                    | 35    |     | ITNA   | 75NAD 02  | 6.9                    |       | 35  | ITNA   | 81GLA 03  |
| 945                    | 35    |     | ITNA   | 78NAD 02  | 7                      |       |     | AA     | 76WEW 01  |
| 990                    | 20    |     | ITNA   | 77MAE 01  | 8.5                    | 4.2   |     | EXRF   | 79GIA 01  |
| 1000                   |       |     | ITNA   | 77GLU 01  | 11                     |       |     | ITNA   | 77GLU 01  |
| 1000                   |       |     | ITNA   | 75KLE 01  |                        |       |     |        |           |
| 1177                   |       |     | ISE    | 80NAD 01  |                        |       |     |        |           |
| <u>Co (ug/g)</u>       |       |     |        |           | <u>Cr (ug/g)</u>       |       |     |        |           |
|                        |       |     |        |           | 8                      |       |     | EXRF   | 82KEE 01  |
|                        |       |     |        |           | 9                      | 2     |     | XRF    | 79PRA 01  |
| 3.9                    | 0.2   |     | ICPES  | 81CHU 01  | 14.1                   | 3.2   |     | ICPES  | 84NAD 01  |
| 4.3                    |       | 11  | ICPES  | 85HAR 01  | 15                     |       |     | ICPES  | 80NAD 01  |
| 4.7                    | 0.32  |     | OES    | 76WEW 01  | 16                     |       | 11  | ICPES  | 85HAR 01  |
| 4.8                    | 0.3   |     | ITNA   | 76BLO 01  | 16                     | 1.2   |     | OES    | 76WEW 01  |
| 4.9                    |       |     | ICPES  | 80NAD 01  | 17                     | 1     |     | ITNA   | 75RIC 01  |
| 5.0                    |       | 34  | WXRF   | 82MIL 01  | 17                     | 1     | 11  | ICPES  | 85HAR 01  |
| 5.1                    | 0.6   |     | ITNA   | 78NAD 02  | 17.6                   | 1     |     | ITNA   | 76RAG 01  |
| 5.13                   | 0.57  |     | ITNA   | 75NAD 02  | 17.8                   | 2     |     | ITNA   | 77CAH 01  |
| 5.2                    | 0.1   |     | ITNA   | 79FRU 01  | 18                     |       |     | ICPES  | 80NAD 01  |
| 5.2                    | 0.4   |     | ITNA   | 73ABE 01  | 18                     | 2     |     | XRF    | 79FRU 01  |
| 5.3                    | 0.4   |     | ITNA   | 76KUC 01  | 18.3                   | 1.8   |     | ITNA   | 85FIL 01  |
| 5.31                   | 0.41  |     | ITNA   | 83NDI 01  | 18.5                   | 1.7   |     | ITNA   | 78MAC 01  |
| 5.4                    |       | 4   | AA     | 79REI 01  | 18.8                   | 1.1   |     | ITNA   | 76BLO 01  |
| 5.46                   | 0.2   |     | ITNA   | 79ROS 03  | 18.9                   | 2.2   |     | ITNA   | 75NAD 02  |
| 5.48                   | 0.15  |     | ITNA   | 73SHE 01  | 18.9                   | 2.2   |     | ITNA   | 78NAD 02  |
| 5.5                    | 0.3   |     | ITNA   | 77CAH 01  | 19                     |       |     | AA     | 76WEW 01  |
| 5.5                    | 0.4   |     | PAA    | 74CHA 01  | 19                     | 0.8   |     | ITNA   | 73SHE 01  |
| 5.5                    | 0.6   |     | ICPES  | 84NAD 01  | 19                     | 2     |     | ITNA   | 79FRU 01  |
| 5.51                   | 0.6   |     | ITNA   | 76RAG 01  | 19                     | 2     |     | ITNA   | 73ABE 01  |
| 5.58                   | 0.21  |     | ITNA   | 75RUC 01  | 19                     | 2.8   |     | ITNA   | 79ROS 03  |
| 5.6                    | 0.4   |     | PAA    | 76CHA 01  | 19                     | 3     |     | SSMS   | 77DON 01  |
| 5.7                    |       |     | ITNA   | 78WEA 01  | 19.4                   |       |     | FAA    | 75POL 01  |
| 5.7                    | 0.1   |     | ITNA   | 78LAU 02  | 19.4                   | 1.3   | 11  | AA     | 82LIN 03  |
| 5.7                    | 0.12  |     | ITNA   | 77ROW 03  | 19.5                   | 0.8   |     | PAA    | 76CHA 01  |
| 5.7                    | 0.12  | D   | NAA    | 79STE 01  | 19.6                   | 0.5   |     | ITNA   | 77MAE 01  |
| 5.7                    | 0.12  |     | IENA   | 77ROW 04  | 19.6                   | 0.6   |     | AA     | 79ROS 03  |
| 5.7                    | 0.3   | 11  | ICPES  | 85HAR 01  | 19.7                   | 0.9   | D   | NAA    | 74OND 01  |
| 5.7                    | 0.4   |     | ITNA   | 75OND 01  | 19.7                   | 0.9   |     | ITNA   | 75OND 01  |
| 5.78                   |       |     | ICPES  | 80NAD 01  | 19.8                   |       |     | FAA    | 78GUI 01  |
| 5.8                    | 0.6   |     | ITNA   | 76WEW 01  | 20                     |       |     | AA     | 78GUI 01  |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cr (ug/g) cont.</u> |       |     |        |           | <u>Cs (ug/g) cont.</u> |       |     |        |           |
| 20                     |       |     | ITNA   | 84CLE 01  | 1.8                    |       | 35  | ITNA   | 81GLA 03  |
| 20                     | 1     | 9   | ITNA   | 78LAU 02  | 1.8                    | 0.1   |     | NAA    | 76HAN 01  |
| 20                     | 3     |     | ITNA   | 78LAU 02  | 1.8                    | 0.3   |     | ITNA   | 75RUC 01  |
| 20.17                  | 0.76  |     | RTNA   | 74MCC 01  | 1.8                    | 0.3   |     | ITNA   | 77CAH 01  |
| 20.2                   | 0.4   |     | AA     | 74RAI 01  | 1.9                    | 0.2   |     | ITNA   | 81WAN 01  |
| 20.3                   | 1.4   | 11  | AA     | 82LIN 03  | 2.3                    | 0.1   |     | ITNA   | 82SUZ 02  |
| 20.3                   | 2.9   |     | ITNA   | 75RUC 01  | 2.55                   | 0.06  |     | ITNA   | 73SHE 01  |
| 20.5                   | 0.6   |     | ITNA   | 79GRE 01  | 2.6                    |       |     | ITNA   | 75MIL 01  |
| 20.6                   |       |     | ITNA   | 75MIL 01  | 3.5                    | 1.3   |     | ITNA   | 78MAC 01  |
| 20.6                   | 2.3   |     | IENA   | 77ROW 04  |                        |       |     |        |           |
| 20.8                   | 0.6   |     | ICPES  | 81CHU 01  | <u>Cu (ug/g)</u>       |       |     |        |           |
| 20.8                   | 0.8   |     | ITNA   | 77ROW 03  | 13                     |       |     | EXRF   | 82KEE 01  |
| 20.8                   | 0.8   | D   | NAA    | 79STE 01  | 14.1                   | 0.9   |     | ITNA   | 73SHE 01  |
| 20.8                   | 0.8   | D   | ITNA   | 77ROW 04  | 15                     | 1.2   |     | ITNA   | 77ROW 03  |
| 21                     | 2     |     | ITNA   | 75KLE 01  | 15                     | 1.2   | D   | NAA    | 79STE 01  |
| 21.5                   |       |     | ITNA   | 78WEA 01  | 15                     | 1.2   |     | ITNA   | 76STE 05  |
| 21.5                   | 1     |     | NAA    | 76HAN 01  | 15                     | 2     |     | XRF    | 79FRU 01  |
| 21.6                   | 2     |     | ITNA   | 76WEW 01  | 15                     | 3     |     | SSMS   | 77DON 01  |
| 21.6                   | 2.1   |     | PAA    | 74CHA 01  | 15.1                   | 0.7   | 11  | ICPES  | 85HAR 01  |
| 22                     |       |     | ITNA   | 77GLU 01  | 15.7                   | 2.7   |     | ITNA   | 81WAN 01  |
| 22                     | 8     |     | EXRF   | 79GIA 01  | 16.3                   |       |     | FAA    | 78GUI 01  |
| 23                     |       | 4   | AA     | 79REI 01  | 16.8                   |       |     | AA     | 78GUI 01  |
| 24                     | 3     |     | ITNA   | 76KUC 01  | 16.8                   | 1     | 8   | SSMS   | 80KOP 01  |
| 25.2                   | 3.8   |     | ITNA   | 81WAN 01  | 16.8                   | 0.3   |     | AA     | 73TAL 01  |
| 32.3                   | 0.9   | 12  | ITNA   | 82SUZ 02  | 17                     | 1     | 35  | RTNA   | 77GLA 01  |
| 34.9                   | 0.9   | 12  | ITNA   | 82SUZ 02  | 17                     | 4     |     | EXRF   | 81KIN 01  |
|                        |       |     |        |           | 17                     | 7.5   |     | OES    | 76WEW 01  |
| <u>Cs (ug/g)</u>       |       |     |        |           | 17.1                   | 0.2   | 11  | AA     | 82LIN 03  |
| 0.35                   | 0.04  |     | PAA    | 74CHA 01  | 17.2                   | 0.5   |     | ICPES  | 81CHU 01  |
| 1.3                    | 0.1   |     | PAA    | 76CHA 01  | 17.4                   |       | 11  | ICPES  | 85HAR 01  |
| 1.3                    | 0.2   |     | ITNA   | 78LAU 02  | 17.7                   | 1.5   |     | EXRF   | 79GIA 01  |
| 1.32                   | 0.11  |     | ITNA   | 78NAD 02  | 17.9                   | 0.2   |     | AA     | 74RAI 01  |
| 1.32                   | 0.11  |     | ITNA   | 75NAD 02  | 18                     |       |     | ICPES  | 80NAD 01  |
| 1.36                   | 0.1   |     | IENA   | 76STE 05  | 18                     |       |     | XRF    | 75KLE 01  |
| 1.4                    |       |     | ITNA   | 75KLE 01  | 18                     |       | 34  | WXRF   | 82MIL 01  |
| 1.4                    |       | 34  | WXRF   | 82MIL 01  | 18.1                   | 0.8   |     | NAA    | 76HAN 01  |
| 1.4                    |       |     | ITNA   | 78WEA 01  | 18.4                   | 0.3   | 11  | AA     | 82LIN 03  |
| 1.4                    | 0.08  |     | ITNA   | 76RAG 01  | 18.4                   | 1.1   |     | SSMS   | 77PAU 01  |
| 1.4                    | 0.1   |     | ITNA   | 73ABE 01  | 19                     |       |     | ICPES  | 80NAD 01  |
| 1.4                    | 0.1   | 9   | ITNA   | 78LAU 02  | 19                     | 3     |     | ICPES  | 84NAD 01  |
| 1.4                    | 0.1   |     | ITNA   | 75OND 01  | 19.4                   | 1.9   |     | FAA    | 74RAI 01  |
| 1.4                    | 0.3   |     | ITNA   | 76WEW 01  | 20                     |       | 4   | AA     | 79REI 01  |
| 1.46                   | 0.11  |     | IENA   | 77ROW 03  | 21                     |       |     | AA     | 76WEW 01  |
| 1.49                   | 0.22  |     | ITNA   | 77ROW 04  | 22.6                   | 3     |     | EXRF   | 73SPA 01  |
| 1.52                   | 0.11  |     | IENA   | 77ROW 04  | 23                     |       |     | ITNA   | 77GLU 01  |
| 1.52                   | 0.11  | D   | NAA    | 79STE 01  | 24                     | 3     |     | XRF    | 79PRA 01  |
| 1.6                    | 0.1   |     | ITNA   | 85FIL 01  | 24                     | 3     | 6   | PAA    | 82SEG 01  |
| 1.6                    | 0.2   |     | ITNA   | 79GRE 01  | 30                     | 10    | 6   | PAA    | 82SEG 01  |
| 1.71                   | 0.04  |     | ITNA   | 77MAE 01  | 30                     | 10    |     | PAA    | 80SEG 01  |
| 1.73                   | 0.09  |     | ITNA   | 79ROS 03  |                        |       |     |        |           |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Dy (ug/g)</u> |       |     |        |           | <u>Eu (ng/g) cont.</u> |       |     |        |           |
| 0.57             | 0.04  |     | NAA    | 76HAN 01  | 410                    | 60    |     | OES    | 76WEW 01  |
| 0.85             | 0.06  |     | ITNA   | 73SHE 01  | 420                    | 10    |     | ITNA   | 77MAE 01  |
| 1                | 0.1   |     | ITNA   | 78MAC 01  | 420                    | 20    |     | ICPES  | 81CHU 01  |
| 1.1              | 0.1   |     | RTNA   | 84ODD 01  | 480                    | 90    |     | ITNA   | 81WAN 01  |
| 1.12             | 0.06  | D   | NAA    | 79STE 01  | 500                    | 60    |     | ITNA   | 82SUZ 02  |
| 1.12             | 0.06  |     | ITNA   | 76STE 05  |                        |       |     |        |           |
| 1.12             | 0.06  |     | ITNA   | 77ROW 03  | <u>F (ug/g)</u>        |       |     |        |           |
| 1.2              | 0.2   |     | ITNA   | 84ODD 01  | 51                     |       |     | ITNA   | 77GLU 01  |
| 1.3              |       |     | AA     | 82GUP 02  | 65                     |       |     | ISE    | 83KNA 01  |
| 1.3              | 0.5   |     | ITNA   | 75RUC 01  | 71                     |       |     | IC     | 83NAD 01  |
| 1.38             | 0.09  |     | ITNA   | 75NAD 02  | 71                     |       |     | ISE    | 81NAD 01  |
| 1.4              |       |     | ITNA   | 75MIL 01  | 80                     | 4     |     | ISE    | 74THO 01  |
| 1.4              | 0.1   |     | ITNA   | 78NAD 02  | 81                     |       |     | VV     | 77GLU 01  |
| 1.59             | 0.16  |     | ITNA   | 77CAH 01  | 87                     |       |     | ISE    | 74THO 01  |
| 2.4              | 0.2   |     | ITNA   | 82SUZ 02  | 90                     |       |     | ISE    | 83NAD 01  |
|                  |       |     |        |           | 91                     | 5     |     | ISE    | 83BET 02  |
|                  |       |     |        |           | 100                    |       |     | AA     | 76WEW 01  |
| <u>Er (ug/g)</u> |       |     |        |           | <u>Fe (ug/g)</u>       |       |     |        |           |
| <                | 3     | L   | WXRF   | 82MIL 01  | 6500                   | 1300  |     | OES    | 76WEW 01  |
| <                | 15    | L   | OES    | 76WEW 01  | 7000                   | 400   |     | ITNA   | 76BLO 01  |
| 0.7              |       |     | AA     | 82GUP 02  | 7150                   | 800   |     | EXRF   | 73SPA 01  |
| 9.3              | 0.2   |     | RTNA   | 84ODD 01  | 7200                   |       |     | EXRF   | 82KEE 01  |
| <u>Eu (ng/g)</u> |       |     |        |           | 7517                   | 119   |     | ITNA   | 73SHE 01  |
| 210              |       |     | ITNA   | 75KLE 01  | 7600                   | 100   |     | ICPES  | 84NAD 01  |
| 270              | 20    |     | ITNA   | 76RAG 01  | 7790                   | 360   |     | EXRF   | 79GIA 01  |
| 280              | 10    |     | ITNA   | 73ABE 01  | 7800                   | 200   |     | ITNA   | 75RIC 01  |
| 299              | 33    |     | ITNA   | 76STE 05  | 7800                   | 350   |     | XRF    | 79FRU 01  |
| 300              | 100   |     | ITNA   | 78MAC 01  | 7900                   |       |     | ITNA   | 84CLE 01  |
| 312              | 37    |     | ITNA   | 73SHE 01  | 8000                   |       |     | ICPES  | 80NAD 01  |
| 330              |       |     | ITNA   | 78WEA 01  | 8100                   | 500   |     | ITNA   | 79FRU 01  |
| 330              | 40    |     | ITNA   | 75OND 01  | 8100                   | 700   |     | ITNA   | 73ABE 01  |
| 340              | 10    |     | NAA    | 76HAN 01  | 8200                   |       |     | ICPES  | 80NAD 01  |
| 340              | 14    |     | ITNA   | 83NDI 01  | 8230                   | 80    | 11  | ICPES  | 85HAR 01  |
| 340              | 20    |     | ITNA   | 78LAU 02  | 8300                   |       |     | ICPES  | 80NAD 01  |
| 340              | 40    |     | ITNA   | 77ROW 03  | 8300                   | 600   |     | ITNA   | 85FIL 01  |
| 340              | 50    |     | ITNA   | 84ODD 01  | 8300                   | 700   |     | ITNA   | 76KUC 01  |
| 344              | 15    |     | ITNA   | 79ROS 03  | 8350                   | 120   |     | AA     | 79ROS 03  |
| 350              | 30    |     | RTNA   | 84ODD 01  | 8380                   | 405   |     | ITNA   | 83NDI 01  |
| 360              | 30    |     | ITNA   | 77CAH 01  | 8400                   |       |     | ITNA   | 75KLE 01  |
| 370              | 20    |     | ITNA   | 78NAD 02  | 8400                   | 200   | D   | TCGS   | 80AND 01  |
| 370              | 20    |     | ITNA   | 75NAD 02  | 8400                   | 200   |     | ITNA   | 78LAU 02  |
| 370              | 40    |     | ITNA   | 76WEW 01  | 8400                   | 200   |     | ITNA   | 76RAG 01  |
| 380              | 40    | D   | NAA    | 79STE 01  | 8400                   | 400   |     | ITNA   | 75OND 01  |
| 380              | 40    |     | ITNA   | 77ROW 04  | 8400                   | 400   | D   | NAA    | 74OND 01  |
| 380              | 40    |     | ITNA   | 79GRE 01  | 8410                   | 250   |     | IENA   | 77ROW 04  |
| 390              | 40    |     | ITNA   | 85FIL 01  | 8420                   | 240   |     | TCGS   | 79FAI 01  |
| 400              |       |     | AA     | 82GUP 02  | 8440                   |       | 11  | ICPES  | 85HAR 01  |
| 400              |       |     | ITNA   | 75MIL 01  | 8500                   | 60    |     | ITNA   | 75NAD 02  |
| 410              | 30    |     | ITNA   | 75RUC 01  |                        |       |     |        |           |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Fe (ug/g) cont.</u> |       |     |        |           | <u>Gd (ug/g)</u> |       |     |        |           |
| 8500                   | 600   |     | ITNA   | 78NAD 02  | 1.2              |       |     | AA     | 82GUP 02  |
| 8527                   |       |     | AA     | 78GUI 01  | 1.2              | 0.06  |     | ICPES  | 81CHU 01  |
| 8600                   |       |     | POL    | 74MAI 01  | 1.43             | 0.05  |     | TCGS   | 79FAI 01  |
| 8600                   |       |     | ITNA   | 78WEA 01  | 2.2              | 0.08  |     | TCGS   | 80AND 01  |
| 8630                   | 266   |     | EXRF   | 81KIN 01  | 2.5              |       |     | ITNA   | 75MIL 01  |
| 8690                   | 410   |     | PAA    | 74CHA 01  | 3                |       | 34  | WXRF   | 82MIL 01  |
| 8700                   |       | 35  | ITNA   | 81GLA 03  | 3                | 0.9   |     | ITNA   | 84ODD 01  |
| 8700                   | 200   |     | ITNA   | 79GRE 01  | 3.1              | 0.2   |     | RTNA   | 84ODD 01  |
| 8700                   | 400   |     | PAA    | 76CHA 01  | 3.6              | 0.4   |     | ITNA   | 78NAD 02  |
| 8730                   |       |     | AA     | 76WEW 01  | 3.62             | 0.35  |     | ITNA   | 75NAD 02  |
| 8800                   |       |     | ICPES  | 80NAD 01  |                  |       |     |        |           |
| 8800                   | 200   |     | ITNA   | 77MAE 01  | <u>Ge (ug/g)</u> |       |     |        |           |
| 8810                   | 210   |     | ICPES  | 81CHU 01  | 2                |       |     | ITNA   | 77GLU 01  |
| 8900                   | 240   |     | XRF    | 79PRA 01  | 2.3              | 0.1   |     | ICPES  | 84NAD 02  |
| 8900                   | 300   |     | ITNA   | 78MAC 01  | 2.4              |       |     | UU     | 78SIM 01  |
| 9000                   | 200   | D   | NAA    | 79STE 01  | 2.7              | 0.22  |     | OES    | 76WEW 01  |
| 9010                   | 150   |     | ITNA   | 77ROW 03  | 2.9              | 0.2   |     | EXRF   | 79GIA 01  |
| 9010                   | 190   | D   | ITNA   | 77ROW 04  | 3                |       | 34  | WXRF   | 82MIL 01  |
| 9030                   |       |     | ITNA   | 75MIL 01  | 5                | 1     |     | XRF    | 79PRA 01  |
| 9130                   | 560   |     | ITNA   | 79ROS 03  | 14.9             |       |     | FAA    | 75POL 01  |
| 9200                   |       | 4   | AA     | 79REI 01  | 70               | 5     |     | ITNA   | 73SHE 01  |
| 9200                   | 300   |     | NAA    | 76HAN 01  |                  |       |     |        |           |
| 9200                   | 700   |     | ITNA   | 81WAN 01  | <u>H (%)</u>     |       |     |        |           |
| 9300                   | 800   |     | ITNA   | 75RUC 01  | 4.02             | 0.05  |     | TCGS   | 79FAI 01  |
| 9300                   | 800   |     | ITNA   | 77CAH 01  | 4.02             | 0.05  | D   | TCGS   | 80AND 01  |
| 9800                   | 1000  |     | ITNA   | 76WEW 01  | 4.28             | 0.03  |     | CB     | 80SCH 02  |
| 11100                  |       |     | ITNA   | 77GLU 01  | 4.3              | 0.1   | 35  | TCGS   | 79GLA 04  |
| 11100                  | 300   | 12  | ITNA   | 82SUZ 02  | 4.57             |       |     | CB     | 79PRA 01  |
| 11300                  | 500   | 12  | ITNA   | 82SUZ 02  | <u>H2O-T (%)</u> |       |     |        |           |
| <u>Ga (ug/g)</u>       |       |     |        |           | <u>Hf (ug/g)</u> |       |     |        |           |
| 4.5                    |       |     | ITNA   | 77GLU 01  | 2.6              |       |     | FD     | 80KHA 02  |
| 4.5                    | 0.5   |     | RTNA   | 75RUC 01  | <u>Hf (ug/g)</u> |       |     |        |           |
| 4.8                    | 0.2   |     | IENA   | 78WAN 01  | 0.72             | 0.071 |     | ITNA   | 79ROS 03  |
| 5                      | 1     |     | ITNA   | 78MAC 01  | 0.81             | 0.1   |     | ITNA   | 78LAU 02  |
| 5.15                   | 0.3   |     | ITNA   | 75RUC 01  | 0.83             | 0.06  |     | IENA   | 77ROW 03  |
| 5.3                    | 0.5   |     | ITNA   | 77CAH 01  | 0.83             | 0.06  | D   | IENA   | 77ROW 04  |
| 5.4                    | 0.8   |     | ITNA   | 73SHE 01  | 0.83             | 0.06  | D   | NAA    | 79STE 01  |
| 5.5                    | 0.7   |     | ITNA   | 81WAN 01  | 0.89             | 0.02  |     | ITNA   | 75NAD 02  |
| 5.8                    |       | 34  | WXRF   | 82MIL 01  | 0.89             | 0.02  |     | ITNA   | 78NAD 02  |
| 5.8                    | 0.4   |     | IENA   | 77ROW 03  | 0.91             | 0.11  |     | ITNA   | 77ROW 04  |
| 5.8                    | 0.4   | D   | NAA    | 79STE 01  | 0.91             | 0.15  |     | ITNA   | 85FIL 01  |
| 5.8                    | 0.4   | 5   | IENA   | 76STE 05  | 0.92             | 0.05  |     | ITNA   | 73SHE 01  |
| 5.8                    | 0.5   |     | ITNA   | 85FIL 01  | 0.95             |       |     | ITNA   | 75KLE 01  |
| 6.1                    | 0.3   |     | EXRF   | 79GIA 01  | 0.96             |       |     | ITNA   | 78WEA 01  |
| 6.1                    | 0.6   | 5   | IENA   | 76STE 05  | 0.96             | 0.05  |     | ITNA   | 75OND 01  |
| 6.2                    | 0.3   |     | OES    | 76WEW 01  | 0.96             | 0.06  |     | ITNA   | 79GRE 01  |
| 7.7                    | 1.4   |     | ITNA   | 82SUZ 02  |                  |       |     |        |           |
| 8                      | 1     |     | XRF    | 79PRA 01  |                  |       |     |        |           |
| 8.5                    |       |     | XRF    | 75KLE 01  |                  |       |     |        |           |
| 9                      | 2     |     | NAA    | 76HAN 01  |                  |       |     |        |           |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Hf (ug/g) cont.</u> |       |     |        |           | <u>I (ug/g)</u>  |       |     |        |           |
| 0.97                   | 0.09  |     | ITNA   | 79FRU 01  | 2.68             | 0.2   |     | RTNA   | 77ROO 01  |
| 0.97                   | 0.1   |     | ITNA   | 73ABE 01  | 2.78             | 0.38  |     | ITNA   | 73SHE 01  |
| 1.00                   | 0.07  |     | ITNA   | 76RAG 01  | 2.8              |       |     | ITNA   | 78WEA 01  |
| 1.02                   | 0.03  |     | ITNA   | 77MAE 01  | 2.8              | 0.4   |     | ITNA   | 75RUC 01  |
| 1.1                    |       |     | ITNA   | 75MIL 01  | 2.9              | 0.3   | D   | NAA    | 79STE 01  |
| 1.1                    | 0.07  |     | NAA    | 76HAN 01  | 2.9              | 0.3   |     | ITNA   | 76STE 05  |
| 1.1                    | 0.15  |     | ITNA   | 75RUC 01  | 3                |       | 34  | WXRF   | 82MIL 01  |
| 1.1                    | 0.2   |     | ITNA   | 77CAH 01  | 3.3              | 0.3   |     | PAA    | 77WIL 01  |
| 1.1                    | 0.4   |     | ITNA   | 81WAN 01  | 3.3              | 0.3   |     | PAA    | 78HIS 01  |
| 1.15                   | 0.12  |     | ITNA   | 76WEW 01  | 3.3              | 0.4   |     | ITNA   | 77CAH 01  |
| 1.4                    | 0.09  | 9   | ITNA   | 82SUZ 02  | 3.3              | 0.5   |     | ITNA   | 77MAE 01  |
| 1.53                   | 0.5   | 9   | ITNA   | 82SUZ 02  | 3.7              | 0.5   |     | IENA   | 84GLA 02  |
|                        |       |     |        |           | 4                | 1     |     | ITNA   | 79GRE 01  |
|                        |       |     |        |           | 6.2              | 1.9   |     | ITNA   | 81WAN 01  |
|                        |       |     |        |           | 6.63             | 1.2   |     | ITNA   | 75NAD 02  |
| <u>Hg (ng/g)</u>       |       |     |        |           | <u>In (ng/g)</u> |       |     |        |           |
| 70                     | 5     |     | CVAA   | 84BAR 02  | 16.9             | 1.2   |     | IENA   | 77ROW 03  |
| 88                     | 5     |     | CVAA   | 75KLE 01  | 16.9             | 1.7   | 5   | IENA   | 76STE 05  |
| 100                    |       |     | PAA    | 74CHA 01  | 17               | 1     | D   | NAA    | 79STE 01  |
| 100                    |       |     | PAA    | 76CHA 01  | 17.8             | 1     | 5   | IENA   | 76STE 05  |
| 100                    |       |     | PAA    | 77JER 01  | 30               | 20    |     | ITNA   | 76RAG 01  |
| 110                    |       |     | ITNA   | 78WEA 01  | 40               | 10    |     | ITNA   | 73SHE 01  |
| 110                    | 10    |     | RTNA   | 84DEL 01  | 56               | 9     |     | ITNA   | 82SUZ 02  |
| 110                    | 10    |     | RTNA   | 74ORV 01  | 70               |       |     | ITNA   | 75KLE 01  |
| 110                    | 10    |     | RTNA   | 75RUC 01  | 180              | 20    |     | ITNA   | 77CAH 01  |
| 110                    | 16    |     | RTNA   | 77JER 01  | 200              | 120   |     | ITNA   | 75OND 01  |
| 110                    | 50    |     | ITNA   | 77JER 01  | 220              | 20    |     | ITNA   | 75RUC 01  |
| 111                    | 10    |     | FAA    | 77GLA 03  | 230              | 20    |     | PAA    | 74CHA 01  |
| 117                    | 13    |     | FAA    | 75KOI 01  | 230              | 30    |     | PAA    | 76CHA 01  |
| 120                    |       |     | CVAA   | 82NAD 01  |                  |       |     |        |           |
| 120                    |       |     | CVAA   | 81NAD 01  |                  |       |     |        |           |
| 120                    | 20    |     | ITNA   | 79FRU 01  |                  |       |     |        |           |
| 122                    | 29    |     | CVAA   | 80DUM 01  |                  |       |     |        |           |
| 126                    | 6     |     | CVAA   | 74RAI 01  |                  |       |     |        |           |
| 136                    | 9     |     | FAA    | 82UCH 02  |                  |       |     |        |           |
| 160                    | 40    |     | ITNA   | 82SUZ 02  | 2.48             | 0.27  |     | ITNA   | 73SHE 01  |
| 160                    | 80    |     | ITNA   | 76WEW 01  | 2.5              |       |     | ITNA   | 78WEA 01  |
| 180                    |       |     | ITNA   | 77GLU 01  | 3.53             | 0.52  |     | RTNA   | 77NAD 02  |
| 230                    | 20    |     | ITNA   | 78NAD 02  |                  |       |     |        |           |
| 230                    | 20    |     | ITNA   | 75NAD 02  |                  |       |     |        |           |
| 230                    | 50    |     | ITNA   | 76BLO 01  |                  |       |     |        |           |
| 510                    | 170   |     | ITNA   | 75RIC 01  | 2410             | 70    |     | XRF    | 79PRA 01  |
| 950                    | 90    |     | ITNA   | 73SHE 01  | 2500             |       |     | ICPES  | 80NAD 01  |
|                        |       |     |        |           | 2500             | 200   | 11  | ICPES  | 85HAR 01  |
|                        |       |     |        |           | 2500             | 200   |     | ICPES  | 84NAD 01  |
|                        |       |     |        |           | 2570             |       | 4   | AA     | 79REI 01  |
|                        |       |     |        |           | 2600             |       | 11  | ICPES  | 85HAR 01  |
|                        |       |     |        |           | 2600             | 200   |     | ITNA   | 76KUC 01  |
|                        |       |     |        |           | 2650             | 190   |     | ITNA   | 76BLO 01  |
|                        |       |     |        |           | 2660             | 20    |     | ITNA   | 75RIC 01  |
|                        |       |     |        |           | 2700             |       |     | ICPES  | 80NAD 01  |
|                        |       |     |        |           | 2700             |       |     | ICPES  | 80NAD 01  |
| <u>Ho (ng/g)</u>       |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| 240                    | 30    |     | IENA   | 77ROW 03  |                  |       |     |        |           |
| 240                    | 30    |     | IENA   | 76STE 05  |                  |       |     |        |           |
| 240                    | 30    | D   | NAA    | 79STE 01  |                  |       |     |        |           |
| 250                    |       |     | FAA    | 82GUP 02  |                  |       |     |        |           |
| 260                    | 30    |     | ITNA   | 84ODD 01  |                  |       |     |        |           |
| 270                    | 40    |     | RTNA   | 84ODD 01  |                  |       |     |        |           |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                  | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>K (ug/g) cont.</u> |       |     |        |           | <u>La (ug/g) cont.</u> |       |     |        |           |
| 2700                  | 100   |     | PAA    | 76CHA 01  | 10.5                   |       |     | ITNA   | 75KLE 01  |
| 2700                  | 200   |     | ITNA   | 79FRU 01  | 10.5                   | 0.2   |     | ITNA   | 79FRU 01  |
| 2700                  | 200   |     | ITNA   | 76RAG 01  | 10.5                   | 0.5   |     | ITNA   | 73ABE 01  |
| 2700                  | 300   |     | NAA    | 76HAN 01  | 10.5                   | 0.9   |     | ITNA   | 81WAN 01  |
| 2750                  | 100   | D   | TCGS   | 80AND 01  | 10.6                   | 0.4   |     | ITNA   | 77CAH 01  |
| 2750                  | 100   |     | TCGS   | 79FAI 01  | 10.7                   |       |     | ITNA   | 78WEA 01  |
| 2780                  | 230   |     | ITNA   | 75NAD 02  | 10.7                   | 0.3   |     | ITNA   | 77MAE 01  |
| 2800                  |       |     | ITNA   | 78WEA 01  | 10.7                   | 0.4   |     | ITNA   | 82SUZ 02  |
| 2800                  | 100   |     | ITNA   | 73ABE 01  | 10.7                   | 1.2   |     | ITNA   | 75OND 01  |
| 2800                  | 200   |     | ITNA   | 77MAE 01  | 10.8                   | 0.3   |     | RTNA   | 84ODD 01  |
| 2800                  | 200   |     | ITNA   | 79GRE 01  | 10.8                   | 0.8   |     | IENA   | 77ROW 04  |
| 2800                  | 200   |     | ITNA   | 78NAD 02  | 11                     |       |     | OES    | 82GUP 02  |
| 2800                  | 200   |     | ITNA   | 78LAU 02  | 11                     | 1     |     | ITNA   | 85FIL 01  |
| 2800                  | 300   |     | ITNA   | 75OND 01  | 11.2                   | 0.3   |     | ITNA   | 83NDI 01  |
| 2800                  | 300   |     | ITNA   | 77CAH 01  | 11.3                   |       |     | ITNA   | 75MIL 01  |
| 2800                  | 500   |     | ITNA   | 76WEW 01  | 11.3                   | 0.4   |     | ITNA   | 75RUC 01  |
| 2840                  | 80    |     | GAMMA  | 73ABE 01  | 11.3                   | 3.3   |     | ITNA   | 73SHE 01  |
| 2900                  |       |     | ITNA   | 75MIL 01  | 11.4                   | 0.3   | 11  | ICPES  | 85HAR 01  |
| 2900                  |       |     | ITNA   | 75KLE 01  | 11.4                   | 0.4   |     | ITNA   | 84ODD 01  |
| 2900                  |       |     | ICPES  | 80NAD 01  | 11.4                   | 0.5   |     | IENA   | 77ROW 03  |
| 2900                  | 200   |     | ITNA   | 75RUC 01  | 11.4                   | 0.5   |     | IENA   | 76STE 05  |
| 2930                  | 120   |     | ITNA   | 83NDI 01  | 11.5                   | 0.7   |     | ITNA   | 79GRE 01  |
| 2980                  | 200   |     | ITNA   | 76STE 05  | 12.7                   |       | 11  | ICPES  | 85HAR 01  |
| 2980                  | 240   |     | ITNA   | 77ROW 03  |                        |       |     |        |           |
| 3000                  | 75    |     | ICPES  | 81CHU 01  | <u>Li (ug/g)</u>       |       |     |        |           |
| 3000                  | 200   | D   | NAA    | 79STE 01  | 24                     | 1.1   |     | OES    | 76WEW 01  |
| 3000                  | 200   |     | ITNA   | 78MAC 01  | 25                     |       |     | AA     | 76WEW 01  |
| 3040                  | 230   |     | ITNA   | 85FIL 01  | 28.7                   | 0.6   |     | ICPES  | 81CHU 01  |
| 3100                  | 500   |     | ITNA   | 81WAN 01  |                        |       |     |        |           |
| 3100                  | 600   |     | OES    | 76WEW 01  | <u>Lu (ng/g)</u>       |       |     |        |           |
| 3300                  |       |     | ITNA   | 77GLU 01  | 100                    |       |     | ITNA   | 75MIL 01  |
| 3500                  | 360   |     | ITNA   | 73SHE 01  | 100                    |       |     | FAA    | 82GUP 02  |
| 4000                  | 200   |     | ITNA   | 82SUZ 02  | 109                    | 11    | D   | ITNA   | 77ROW 04  |
| <u>La (ug/g)</u>      |       |     |        |           | 109                    | 11    | D   | NAA    | 79STE 01  |
| 6                     | 0.17  |     | OES    | 76WEW 01  | 109                    | 11    |     | ITNA   | 77ROW 03  |
| 7.89                  | 0.15  |     | ITNA   | 75NAD 02  | 120                    | 5     |     | ITNA   | 75NAD 02  |
| 7.9                   | 0.2   |     | ITNA   | 78NAD 02  | 120                    | 10    |     | ITNA   | 78NAD 02  |
| 8.3                   | 0.2   |     | ITNA   | 78MAC 01  | 130                    | 5     |     | ITNA   | 77MAE 01  |
| 9.1                   | 0.4   |     | ITNA   | 76BLO 01  | 130                    | 20    |     | ITNA   | 84ODD 01  |
| 9.3                   | 0.3   |     | ICPES  | 81CHU 01  | 130                    | 30    |     | ITNA   | 77CAH 01  |
| 9.3                   | 0.5   |     | ITNA   | 78LAU 02  | 140                    | 10    |     | ITNA   | 75OND 01  |
| 9.5                   | 0.2   |     | ITNA   | 76RAG 01  | 140                    | 20    |     | ITNA   | 78LAU 02  |
| 9.76                  | 0.45  |     | NAA    | 76HAN 01  | 140                    | 20    |     | NAA    | 76HAN 01  |
| 10                    |       | 34  | WXRF   | 82MIL 01  | 140                    | 30    |     | RTNA   | 84ODD 01  |
| 10                    |       |     | FAA    | 82GUP 02  | 140                    | 70    |     | ITNA   | 81WAN 01  |
| 10.3                  | 0.5   |     | ITNA   | 77ROW 03  | 150                    | 10    |     | ITNA   | 75RUC 01  |
| 10.3                  | 0.5   | D   | ITNA   | 77ROW 04  | 150                    | 20    |     | ITNA   | 76WEW 01  |
| 10.3                  | 0.5   | D   | NAA    | 79STE 01  | 210                    | 20    |     | ITNA   | 82SUZ 02  |
| 10.3                  | 1.1   |     | ITNA   | 76STE 05  | 416                    | 17    |     | ITNA   | 73SHE 01  |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Mg (ug/g)</u> |       |     |        |           | <u>Mn (ug/g) cont.</u> |       |     |        |           |
| 980              | 250   |     | ITNA   | 73SHE 01  | 40                     | 4     |     | ITNA   | 76WEW 01  |
| 1000             | 100   |     | ICPES  | 84NAD 01  | 40                     | 7     |     | ITNA   | 78NAD 02  |
| 1100             |       |     | ITNA   | 77GLU 01  | 40.3                   | 6.9   |     | ITNA   | 75NAD 02  |
| 1100             | 300   |     | ITNA   | 77MAE 01  | 41                     |       |     | ITNA   | 78WEA 01  |
| 1150             | 40    | 11  | ICPES  | 85HAR 01  | 41                     | 1     |     | ITNA   | 75RIC 01  |
| 1190             |       | 11  | ICPES  | 85HAR 01  | 41                     | 2     |     | NAA    | 76HAN 01  |
| 1200             |       |     | ICPES  | 80NAD 01  | 41                     | 4     | D   | NAA    | 79STE 01  |
| 1200             |       |     | ICPES  | 80NAD 01  | 41                     | 6     |     | ITNA   | 80BUA 01  |
| 1340             | 270   |     | ITNA   | 82SUZ 02  | 41                     | 6     |     | ITNA   | 73ABE 01  |
| 1370             | 40    |     | ICPES  | 81CHU 01  | 41.1                   | 3.6   |     | ITNA   | 76STE 05  |
| 1400             |       |     | ICPES  | 80NAD 01  | 41.1                   | 3.6   |     | ITNA   | 77ROW 03  |
| 1500             | 300   |     | ITNA   | 75NAD 02  | 41.2                   |       | 11  | ICPES  | 85HAR 01  |
| 1500             | 300   |     | ITNA   | 78NAD 02  | 41.7                   | 0.5   |     | AA     | 79ROS 03  |
| 1600             |       |     | ICPES  | 80NAD 01  | 42                     |       |     | ICPES  | 80NAD 01  |
| 1600             | 150   |     | PAA    | 74CHA 01  | 42                     | 1     |     | ITNA   | 79GRE 01  |
| 1600             | 200   |     | PAA    | 76CHA 01  | 42                     | 6     |     | ITNA   | 79FRU 01  |
| 1600             | 300   |     | OES    | 76WEW 01  | 42.5                   | 5.8   |     | ITNA   | 81WAN 01  |
| 1700             | 200   |     | ITNA   | 79GRE 01  | 42.8                   | 1.9   |     | ITNA   | 83NDI 01  |
| 1700             | 300   |     | ITNA   | 76STE 05  | 42.8                   | 2.4   |     | ITNA   | 77CAH 01  |
| 1700             | 300   | D   | NAA    | 79STE 01  | 43                     | 1     |     | ITNA   | 78MAC 01  |
| 1700             | 300   |     | ITNA   | 77ROW 03  | 43                     | 3     |     | PAA    | 76CHA 01  |
| 1900             | 400   |     | NAA    | 76HAN 01  | 43                     | 4     | D   | NAA    | 74OND 01  |
| 2000             | 400   |     | ITNA   | 76WEW 01  | 43                     | 4     |     | ITNA   | 75OND 01  |
| 2000             | 500   |     | ITNA   | 75OND 01  | 43                     | 6     |     | ITNA   | 76BLO 01  |
| 2300             | 400   |     | ITNA   | 81WAN 01  | 43.5                   | 2.4   |     | TCGS   | 79FAI 01  |
| 2300             | 700   |     | ITNA   | 73ABE 01  | 43.5                   | 2.4   | D   | TCGS   | 80AND 01  |
| 2480             |       |     | ITNA   | 75KLE 01  | 43.7                   | 1.8   |     | ITNA   | 75RUC 01  |
| 2500             | 800   |     | ITNA   | 76RAG 01  | 44                     | 0.9   | 11  | AA     | 82LIN 03  |
| 4000             | 2000  |     | ITNA   | 78LAU 02  | 44                     | 2     |     | ITNA   | 78LAU 02  |
| 8200             | 2000  |     | ITNA   | 78MAC 01  | 44.5                   | 0.9   |     | ITNA   | 77MAE 01  |
|                  |       |     |        |           | 44.6                   | 0.4   | 11  | AA     | 82LIN 03  |
|                  |       |     |        |           | 45                     |       |     | ICPES  | 80NAD 01  |
|                  |       |     |        |           | 45                     | 1.4   |     | ICPES  | 81CHU 01  |
|                  |       |     |        |           | 45                     | 3     |     | ITNA   | 76KUC 01  |
|                  |       |     |        |           | 46                     |       |     | ITNA   | 75MIL 01  |
|                  |       |     |        |           | 46                     | 3     |     | ITNA   | 75KLE 01  |
|                  |       |     |        |           | 47.1                   | 4.1   |     | PAA    | 74CHA 01  |
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Mo (ug/g)</u>       |       |     |        |           |
| 27.5             | 2.4   |     | ITNA   | 82SUZ 02  | 0.2                    | 0.02  |     | PAA    | 74CHA 01  |
| 36               | 1.8   |     | OES    | 76WEW 01  | 0.2                    | 0.04  |     | PAA    | 76CHA 01  |
| 36.8             |       |     | FAA    | 78GUI 01  | 0.3                    | 0.1   |     | PAA    | 80SEG 01  |
| 37               |       |     | EXRF   | 82KEE 01  | 0.3                    | 0.1   | 6   | PAA    | 82SEG 01  |
| 37               | 2     |     | EXRF   | 81KIN 01  | 0.3                    | 0.1   | 6   | PAA    | 82SEG 01  |
| 37               | 4     |     | XRF    | 79PRA 01  | 0.41                   | 0.1   |     | ITNA   | 82SUZ 02  |
| 38               |       | 4   | AA     | 79REI 01  | 3.08                   | 0.12  |     | IENA   | 77ROW 03  |
| 38               | 2.6   |     | ITNA   | 73SHE 01  | 3.08                   | 0.12  | D   | IENA   | 77ROW 04  |
| 38               | 8     | 35  | ITNA   | 81GLA 03  | 3.1                    | 0.1   | D   | NAA    | 79STE 01  |
| 38.3             | 0.8   | 11  | ICPES  | 85HAR 01  | 3.14                   | 0.28  |     | RTNA   | 78NAD 01  |
| 38.5             |       |     | AA     | 78GUI 01  | 3.2                    | 0.4   |     | ITNA   | 77CAH 01  |
| 39               |       | 34  | WXRF   | 82MIL 01  |                        |       |     |        |           |
| 39               |       |     | ITNA   | 84CLE 01  |                        |       |     |        |           |
| 39               |       |     | ITNA   | 77GLU 01  |                        |       |     |        |           |
| 39               | 2     |     | ICPES  | 84NAD 01  |                        |       |     |        |           |
| 39               | 3     |     | EXRF   | 79GIA 01  |                        |       |     |        |           |
| 39.5             | 0.7   |     | ITNA   | 76RAG 01  |                        |       |     |        |           |
| 40               |       |     | AA     | 76WEW 01  |                        |       |     |        |           |



TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ni (ug/g) cont.</u> |       |     |        |           | <u>P (ug/g)</u>  |       |     |        |           |
| 14                     | 2     |     | PAA    | 76CHA 01  | 71               |       |     | AA     | 76WEW 01  |
| 14.3                   |       |     | AA     | 78GUI 01  | 92               |       |     | ICPES  | 80NAD 01  |
| 14.5                   |       |     | XRF    | 75KLE 01  | 104              |       |     | ICPES  | 80NAD 01  |
| 14.5                   | 0.6   | 11  | AA     | 82LIN 03  | 117              | 4     | 11  | ICPES  | 85HAR 01  |
| 14.5                   | 1.2   |     | EXRF   | 79GIA 01  | 120              |       |     | VV     | 77GLU 01  |
| 14.7                   | 0.6   | 6   | IDMS   | 74MOO 01  | 121              |       | 11  | ICPES  | 85HAR 01  |
| 14.7                   | 0.6   | 6   | IDMS   | 74MOO 01  | 137              | 14    |     | ICPES  | 84NAD 01  |
| 14.8                   |       |     | POL    | 74MAI 01  | 138              |       | 34  | WXRF   | 82MIL 01  |
| 14.8                   | 0.7   | 6   | IDMS   | 74MOO 01  | 150              | 9     |     | ICPES  | 81CHU 01  |
| 15                     |       |     | AA     | 76WEW 01  | 156              |       |     | ICPES  | 81NAD 01  |
| 15                     |       | 34  | WXRF   | 82MIL 01  | 250              |       |     | COLOR  | 80NAD 01  |
| 15                     | 1.1   |     | OES    | 76WEW 01  | 270              |       |     | COLOR  | 80NAD 01  |
| 15                     | 3     |     | SSMS   | 77DON 01  | 1200             | 100   |     | XRF    | 79PRA 01  |
| 15.2                   | 0.5   |     | ICPES  | 81CHU 01  | <u>Pb (ug/g)</u> |       |     |        |           |
| 15.5                   | 1.1   | 8   | SSMS   | 80KOP 01  | 12               | 120   | R   | OES    | 76WEW 01  |
| 16                     |       | D   | NAA    | 79STE 01  | 13.6             | 6.5   |     | EXRF   | 79GIA 01  |
| 16                     |       |     | ICPES  | 80NAD 01  | 15               |       |     | ICPES  | 80NAD 01  |
| 16                     | 2     |     | ICPES  | 84NAD 01  | 19.1             |       |     | ICPES  | 81NAD 01  |
| 16                     | 2     |     | ITNA   | 79FRU 01  | 20               |       |     | ICPES  | 80NAD 01  |
| 16                     | 4     |     | ITNA   | 73ABE 01  | 20               | 2     |     | XRF    | 79PRA 01  |
| 16                     | 5     |     | ITNA   | 77CAH 01  | 23               |       |     | VV     | 77GLU 01  |
| 16.4                   |       |     | IENA   | 77ROW 04  | 23               | 0.9   |     | EXRF   | 73SPA 01  |
| 17.1                   |       |     | FAA    | 78GUI 01  | 24               |       | 4   | AA     | 79REI 01  |
| 17.5                   | 1     |     | EXRF   | 81KIN 01  | 24               | 4     | 11  | ICPES  | 85HAR 01  |
| 18                     | 4     |     | ITNA   | 75OND 01  | 25.5             | 4.2   | 11  | AA     | 82LIN 03  |
| 18                     | 4     | D   | NAA    | 74OND 01  | 26               | 6     |     | FAA    | 76BLO 01  |
| 18                     | 5     |     | NAA    | 76HAN 01  | 26.1             |       |     | AA     | 78GUI 01  |
| 18.4                   | 2.1   |     | ITNA   | 75RUC 01  | 27.9             | 2.5   | 8   | SSMS   | 80KOP 01  |
| 18.9                   | 0.8   | 12  | ITNA   | 82SUZ 02  | 28               | 1     | 6   | PAA    | 82SEG 01  |
| 19                     |       |     | ICPES  | 80NAD 01  | 28               | 2     |     | PAA    | 80SEG 01  |
| 20                     |       |     | ITNA   | 77GLU 01  | 28               | 2     | 6   | PAA    | 82SEG 01  |
| 20                     | 11    |     | ITNA   | 85FIL 01  | 28               | 3.6   |     | SSMS   | 77PAU 01  |
| 20.4                   | 1     | 12  | ITNA   | 82SUZ 02  | 28               | 4     |     | IDMS   | 78CAR 02  |
| 83                     | 7     |     | XRF    | 79PRA 01  | 28               | 5     |     | FAA    | 75BLO 02  |
| <u>O (%)</u>           |       |     |        |           | 28.4             |       |     | POL    | 74MAI 01  |
| 10.08                  |       |     | CALC   | 79PRA 01  | 28.5             | 1.5   |     | ICPES  | 81CHU 01  |
| 15.05                  | 0.11  | 34  | 14NAA  | 80KHA 02  | 28.6             |       |     | FAA    | 78GUI 01  |
| <u>Os (ug/g)</u>       |       |     |        |           | 29               | 0.5   |     | AA     | 73TAL 01  |
| <                      | 1     |     | RTNA   | 77NAD 02  | 29               | 2     |     | PAA    | 77JER 01  |
|                        |       |     |        |           | 29.4             |       |     | IDMS   | 75KLE 01  |
|                        |       |     |        |           | 30               |       |     | AA     | 76WEW 01  |
|                        |       |     |        |           | 30.8             |       |     | FAA    | 75POL 01  |
|                        |       |     |        |           | 31               | 3     |     | EXRF   | 81KIN 01  |
|                        |       |     |        |           | 32               |       | 34  | WXRF   | 82MIL 01  |
|                        |       |     |        |           | 32               | 2     |     | PAA    | 76CHA 01  |
|                        |       |     |        |           | 32               | 2     |     | PAA    | 77JER 01  |
|                        |       |     |        |           | 32.1             | 1.8   |     | PAA    | 74CHA 01  |
|                        |       |     |        |           | 33               | 2     |     | AA     | 79ROS 03  |
|                        |       |     |        |           | 33               | 3     |     | SSMS   | 77DON 01  |
|                        |       |     |        |           | 33.8             | 0.1   | 11  | AA     | 82LIN 03  |
|                        |       |     |        |           | 36               |       | 11  | ICPES  | 85HAR 01  |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Pd (ng/g)</u> |       |     |        |           | <u>Rb (ug/g) cont.</u> |       |     |        |           |
| <                | 5     |     | RTNA   | 77NAD 02  | 24                     |       |     | XRF    | 75KLE 01  |
|                  |       |     |        |           | 24                     |       |     | ITNA   | 75MIL 01  |
| <u>Pr (ug/g)</u> |       |     |        |           | 24.7                   | 1     |     | ITNA   | 79ROS 03  |
| <                | 2     | L   | FAA    | 82GUP 02  | 26                     | 1     | 12  | ITNA   | 82SUZ 02  |
| <                | 15    | L   | OES    | 76WEW 01  | 28.6                   | 3.2   |     | EXRF   | 73SPA 01  |
| 2                |       | 34  | WXRF   | 82MIL 01  | 30                     | 1     | 12  | ITNA   | 82SUZ 02  |
| 3.6              | 0.4   | 12  | ITNA   | 82SUZ 02  | <u>Rh (ug/g)</u>       |       |     |        |           |
| 4.6              | 0.5   | 12  | ITNA   | 82SUZ 02  | <                      | 5     | L   | OES    | 76WEW 01  |
| 4.9              | 0.5   |     | RTNA   | 84ODD 01  | <u>Ru (ng/g)</u>       |       |     |        |           |
| <u>Pt (ng/g)</u> |       |     |        |           | <                      | 5000  | L   | OES    | 76WEW 01  |
| <                | 15000 | L   | OES    | 76WEW 01  | 18                     | 1     |     | RTNA   | 77NAD 02  |
| 186              | 2.3   |     | RTNA   | 77NAD 01  | <u>S (%)</u>           |       |     |        |           |
| 270              | 20    |     | RTNA   | 77NAD 02  | 0.17                   |       |     | ICPES  | 80NAD 01  |
| <u>Rb (ug/g)</u> |       |     |        |           | 0.17                   |       |     | CB     | 80NAD 01  |
| 10               | 3     |     | ITNA   | 81WAN 01  | 0.9                    |       |     | CB     | 80NAD 01  |
| 11               | 1     |     | XRF    | 79PRA 01  | 0.9                    |       |     | ICPES  | 80NAD 01  |
| 15               |       | 35  | ITNA   | 81GLA 03  | 1.22                   |       |     | IC     | 83NAD 01  |
| 16.3             | 3.7   |     | ITNA   | 75NAD 02  | 1.25                   |       |     | XRF    | 77GLU 01  |
| 16.3             | 3.7   |     | ITNA   | 78NAD 02  | 1.29                   | 0.03  | D   | TCGS   | 80AND 01  |
| 18               |       | 34  | WXRF   | 82MIL 01  | 1.29                   | 0.03  |     | TCGS   | 79FAI 01  |
| 18               | 1     |     | XRF    | 79FRU 01  | 1.3                    | 0.02  |     | IC     | 85GEN 01  |
| 18.3             | 1.1   | D   | IENA   | 77ROW 04  | 1.32                   |       |     | XRF    | 82NAD 01  |
| 18.3             | 1.6   |     | IENA   | 77ROW 03  | 1.32                   |       |     | XRF    | 81NAD 01  |
| 18.3             | 1.6   | D   | NAA    | 79STE 01  | 1.32                   | 0.01  |     | CB     | 86GAU 01  |
| 19               | 1.5   |     | ITNA   | 76RAG 01  | 1.32                   | 0.03  |     | CB     | 85GLA 03  |
| 19               | 1.9   |     | ITNA   | 73SHE 01  | 1.32                   | 0.07  |     | TCGS   | 77JUR 01  |
| 19               | 2     |     | ITNA   | 79FRU 01  | 1.34                   | 0.08  |     | CB     | 84GLA 11  |
| 19               | 2     |     | ITNA   | 73ABE 01  | 1.52                   | 0.05  |     | XRF    | 79PRA 01  |
| 19               | 6     |     | ITNA   | 76WEW 01  | 1.99                   |       |     | CB     | 77LAD 01  |
| 19.4             | 2.3   |     | ITNA   | 77ROW 04  | 2.02                   |       |     | TITR   | 77LAD 01  |
| 19.5             |       |     | ITNA   | 75KLE 01  | <u>Sb (ug/g)</u>       |       |     |        |           |
| 20               | 2     |     | PAA    | 76CHA 01  | 0.61                   | 0.05  |     | ITNA   | 82SUZ 02  |
| 20               | 2     |     | PAA    | 75OND 01  | 1.8                    | 0.9   |     | FAA    | 77ARU 01  |
| 20               | 2     |     | ITNA   | 79GRE 01  | 2.2                    |       |     | ITNA   | 75MIL 01  |
| 20               | 2     | 9   | ITNA   | 78LAU 02  | 2.3                    | 5.8   | R*  | COLOR  | 77ARU 01  |
| 20               | 4     |     | ITNA   | 78LAU 02  | 2.6                    | 2     |     | ITNA   | 77ARU 01  |
| 20.1             | 0.6   |     | EXRF   | 79GIA 01  | 2.6                    | 3.6   |     | ITNA   | 85FIL 01  |
| 21               |       |     | ITNA   | 78WEA 01  | 2.7                    |       | 5   | ITNA   | 77ROW 04  |
| 21               | 2     |     | ITNA   | 75OND 01  | 2.8                    |       | 5   | IENA   | 77ROW 04  |
| 22               | 2.9   |     | OES    | 76WEW 01  | 2.8                    | 0.7   |     | ITNA   | 81WAN 01  |
| 22.5             | 0.7   |     | ITNA   | 77MAE 01  | 3.0                    |       | 34  | WXRF   | 82MIL 01  |
| 22.5             | 3.7   |     | ITNA   | 75RUC 01  | 3.0                    |       | 5   | ITNA   | 77ROW 04  |
| 22.8             | 4.8   |     | ITNA   | 77CAH 01  | 3.0                    |       |     | IENA   | 77ROW 03  |
| 23               | 3     |     | NAA    | 76HAN 01  |                        |       |     |        |           |
| 23               | 4     |     | ITNA   | 85FIL 01  |                        |       |     |        |           |
| 23               | 7     |     | ITNA   | 76KUC 01  |                        |       |     |        |           |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Sb (ug/g) cont.</u> |       |     |        |           | <u>Sc (ug/g) cont.</u> |       |     |        |           |
| 3.0                    |       |     | RTNA   | 75RUC 01  | 3.8                    | 0.1   | 11  | ICPES  | 85HAR 01  |
| 3.0                    |       | D   | NAA    | 79STE 01  | 3.8                    | 0.4   |     | ITNA   | 76WEW 01  |
| 3.0                    |       |     | ITNA   | 77GLU 01  | 3.81                   | 0.47  |     | ITNA   | 75RUC 01  |
| 3.06                   | 1.4   |     | ITNA   | 75NAD 02  | 3.88                   | 0.15  |     | NAA    | 76HAN 01  |
| 3.09                   | 0.26  |     | PAA    | 74CHA 01  | 3.9                    | 0.2   |     | ITNA   | 76KUC 01  |
| 3.1                    | 1.4   |     | ITNA   | 78NAD 02  | 3.95                   | 0.06  |     | IENA   | 77ROW 04  |
| 3.2                    |       | 5   | IENA   | 77ROW 04  | 3.98                   | 0.04  |     | ITNA   | 78MAC 01  |
| 3.2                    |       | 35  | ITNA   | 81GLA 03  | 4                      | 0.2   |     | ITNA   | 79GRE 01  |
| 3.4                    | 0.1   |     | ITNA   | 76RAG 01  | 4.1                    |       | 34  | WXRF   | 82MIL 01  |
| 3.4                    | 0.8   |     | ITNA   | 75RUC 01  | 4.1                    |       |     | ITNA   | 75MIL 01  |
| 3.6                    | 0.8   |     | ITNA   | 77CAH 01  | 4.1                    | 0.2   |     | ITNA   | 81WAN 01  |
| 3.6                    | 1.2   |     | ITNA   | 77MAE 01  | 4.1                    | 0.4   |     | ITNA   | 85FIL 01  |
| 3.62                   |       |     | FAA    | 75POL 01  | 4.2                    | 0.1   |     | ITNA   | 77MAE 01  |
| 3.7                    | 0.3   |     | ITNA   | 79FRU 01  | 4.5                    |       |     | ITNA   | 75KLE 01  |
| 3.7                    | 2     |     | ITNA   | 73ABE 01  | 5.4                    | 0.1   |     | ITNA   | 82SUZ 02  |
| 3.8                    |       |     | ITNA   | 84CLE 01  | <u>Se (ug/g)</u>       |       |     |        |           |
| 3.8                    | 0.2   |     | ITNA   | 78MAC 01  | 1.1                    | 0.08  |     | CPXRF  | 80KIR 01  |
| 3.8                    | 0.4   |     | NAA    | 76HAN 01  | 2                      |       |     | HAA    | 74BYR 02  |
| 3.82                   | 0.1   |     | ITNA   | 78LAU 02  | 2.3                    | 0.2   | 9   | ITNA   | 82SUZ 02  |
| 3.9                    |       |     | ITNA   | 78WEA 01  | 2.4                    | 0.1   |     | ITNA   | 78NAD 02  |
| 3.9                    | 0.24  |     | ITNA   | 77JER 01  | 2.44                   | 0.08  |     | ITNA   | 75NAD 02  |
| 3.9                    | 0.3   |     | PAA    | 76CHA 01  | 2.5                    | 0.2   |     | ITNA   | 80WAN 01  |
| 3.9                    | 0.3   |     | PAA    | 77JER 01  | 2.51                   | 0.13  | 8   | SSMS   | 80KOP 01  |
| 3.9                    | 1.3   |     | ITNA   | 75OND 01  | 2.6                    | 0.1   | 9   | ITNA   | 82SUZ 02  |
| 4.1                    | 1.2   |     | ITNA   | 76WEW 01  | 2.6                    | 0.16  |     | FAA    | 77ARU 01  |
| 4.3                    | 0.3   |     | ITNA   | 79GRE 01  | 2.6                    | 0.3   | 9   | ITNA   | 80WAN 01  |
| 4.4                    | 0.3   |     | FAA    | 78HAY 01  | 2.7                    | 0.2   |     | RTNA   | 74ORV 01  |
| 4.45                   |       |     | ITNA   | 75KLE 01  | 2.8                    |       |     | ITNA   | 77GLU 01  |
| 6.4                    | 1.6   |     | ITNA   | 73SHE 01  | 2.8                    | 0.11  |     | RTNA   | 75RUC 01  |
| <u>Sc (ug/g)</u>       |       |     |        |           | 2.86                   | 0.13  |     | DCPES  | 81CAR 02  |
| 3.4                    | 0.3   |     | ITNA   | 77CAH 01  | 2.86                   | 0.13  |     | GCMES  | 75KLE 01  |
| 3.4                    | 0.3   |     | ITNA   | 73ABE 01  | 2.86                   | 0.13  |     | GCMES  | 74TAL 02  |
| 3.47                   |       |     | ITNA   | 84GLA 11  | 2.9                    | 0.1   |     | ICPES  | 80HAA 01  |
| 3.5                    | 0.08  |     | ITNA   | 75NAD 02  | 2.9                    | 0.2   |     | ITNA   | 79GRE 01  |
| 3.5                    | 0.1   |     | ITNA   | 78NAD 02  | 2.9                    | 0.2   |     | XRF    | 77ARU 01  |
| 3.58                   | 0.35  |     | PAA    | 74CHA 01  | 2.9                    | 0.4   |     | ITNA   | 76RAG 01  |
| 3.6                    | 0.08  |     | OES    | 76WEW 01  | 2.99                   | 0.07  |     | SSMS   | 77PAU 01  |
| 3.6                    | 0.3   |     | ITNA   | 83NDI 01  | 3                      |       | 34  | WXRF   | 82MIL 01  |
| 3.6                    | 0.3   |     | PAA    | 76CHA 01  | 3.0                    | 0.3   |     | PAA    | 76CHA 01  |
| 3.68                   | 0.08  |     | ITNA   | 76RAG 01  | 3.0                    | 0.3   | H   | OES    | 80CLA 01  |
| 3.69                   | 0.05  |     | ITNA   | 78LAU 02  | 3.0                    | 0.3   | D   | NAA    | 79STE 01  |
| 3.7                    |       |     | ITNA   | 78WEA 01  | 3.0                    | 0.3   | D   | IENA   | 77ROW 04  |
| 3.7                    | 0.1   |     | ITNA   | 75RIC 01  | 3.0                    | 0.3   |     | IENA   | 77ROW 03  |
| 3.7                    | 0.3   |     | ITNA   | 75OND 01  | 3.0                    | 0.4   |     | RTNA   | 80KNA 01  |
| 3.75                   | 0.24  |     | ITNA   | 79ROS 03  | 3.0                    | 0.4   | 6   | PAA    | 82SEG 01  |
| 3.8                    |       | 11  | ICPES  | 85HAR 01  | 3                      | 1     | 6   | PAA    | 82SEG 01  |
| 3.8                    | 0.05  | D   | NAA    | 79STE 01  | 3                      | 1     |     | PAA    | 80SEG 01  |
| 3.8                    | 0.05  |     | ITNA   | 77ROW 03  | 3.03                   | 0.28  |     | PAA    | 74CHA 01  |
| 3.8                    | 0.05  | D   | ITNA   | 77ROW 04  | 3.05                   |       |     | ITNA   | 75KLE 01  |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Se (ug/g) cont.</u> |       |     |        |           | <u>Sm (ug/g)</u> |       |     |        |           |
| 3.05                   | 0.48  |     | ASV    | 76AND 01  | 1.3              | 0.19  |     | ITNA   | 73SHE 01  |
| 3.1                    |       |     | ITNA   | 78WEA 01  | 1.3              | 0.2   |     | ICPES  | 81CHU 01  |
| 3.1                    | 0.2   |     | EXRF   | 79GIA 01  | 1.38             | 0.09  |     | ITNA   | 77ROW 04  |
| 3.1                    | 0.3   |     | ITNA   | 85FIL 01  | 1.38             | 0.1   |     | IENA   | 76STE 05  |
| 3.1                    | 0.4   |     | XRF    | 79FRU 01  | 1.4              |       |     | FAA    | 82GUP 02  |
| 3.1                    | 0.6   |     | ITNA   | 78MAC 01  | 1.4              | 0.1   |     | IENA   | 77ROW 03  |
| 3.1                    | 1.6   |     | ITNA   | 76WEW 01  | 1.4              | 0.1   |     | ITNA   | 78MAC 01  |
| 3.2                    | 0.3   |     | ITNA   | 75RIC 01  | 1.41             | 0.06  | D   | NAA    | 79STE 01  |
| 3.2                    | 0.4   |     | ITNA   | 76BLO 01  | 1.41             | 0.06  |     | IENA   | 77ROW 04  |
| 3.3                    | 0.2   | 9   | ITNA   | 78LAU 02  | 1.53             | 0.02  |     | TCGS   | 79FAI 01  |
| 3.3                    | 0.3   |     | ITNA   | 79FRU 01  | 1.53             | 0.02  | D   | TCGS   | 80AND 01  |
| 3.3                    | 0.4   |     | ITNA   | 73ABE 01  | 1.55             | 0.07  |     | NAA    | 76HAN 01  |
| 3.3                    | 0.6   |     | ITNA   | 78LAU 02  | 1.6              |       |     | ITNA   | 75MIL 01  |
| 3.4                    | 0.2   |     | ITNA   | 75OND 01  | 1.6              | 0.2   |     | ITNA   | 77CAH 01  |
| 3.4                    | 0.2   | D   | NAA    | 74OND 01  | 1.66             | 0.16  |     | ITNA   | 75NAD 02  |
| 3.5                    | 0.3   |     | ITNA   | 77MAE 01  | 1.7              |       |     | ITNA   | 78WEA 01  |
| 3.6                    | 0.4   |     | ITNA   | 75RUC 01  | 1.7              | 0.2   |     | ITNA   | 78NAD 02  |
| 3.7                    |       |     | ITNA   | 84CLE 01  | 1.7              | 0.2   |     | ITNA   | 75OND 01  |
| 3.7                    | 0.7   |     | ITNA   | 77ROW 04  | 1.7              | 0.3   |     | ITNA   | 73ABE 01  |
| 3.8                    | 0.51  |     | ITNA   | 73SHE 01  | 1.7              | 0.3   |     | ITNA   | 84ODD 01  |
| 3.8                    | 0.7   |     | ITNA   | 77CAH 01  | 1.72             | 0.08  |     | ITNA   | 76RAG 01  |
| 3.9                    | 0.4   |     | ITNA   | 81WAN 01  | 1.74             | 0.02  |     | ITNA   | 78LAU 02  |
| 4.7                    |       |     | COLOR  | 74BYR 02  | 1.8              | 0.07  |     | ITNA   | 85FIL 01  |
| 5.5                    | 0.5   |     | EXRF   | 73SPA 01  | 1.8              | 0.1   |     | RTNA   | 84ODD 01  |
| 6                      | 1     |     | XRF    | 79PRA 01  | 1.8              | 0.1   |     | ITNA   | 75RUC 01  |
|                        |       |     |        |           | 1.83             | 0.08  |     | ITNA   | 83NDI 01  |
|                        |       |     |        |           | 1.9              | 0.2   |     | ITNA   | 79GRE 01  |
|                        |       |     |        |           | 1.93             | 0.14  |     | ITNA   | 77MAE 01  |
|                        |       |     |        |           | 2.9              | 0.2   |     | ITNA   | 82SUZ 02  |
| <u>Si (%)</u>          |       |     |        |           | <u>Sn (ug/g)</u> |       |     |        |           |
| 2.1                    | 0.42  |     | OES    | 76WEW 01  | 2                | 10    | R   | OES    | 76WEW 01  |
| 2.6                    |       | 4   | AA     | 79REI 01  | 4                | 0.2   |     | ICPES  | 80HAA 01  |
| 2.68                   | 0.2   |     | ICPES  | 84NAD 01  | 5                |       | 34  | WXRF   | 82MIL 01  |
| 2.95                   | 0.06  |     | TCGS   | 79FAI 01  | 8                |       |     | ICPES  | 80NAD 01  |
| 2.95                   | 0.06  | D   | TCGS   | 80AND 01  | 9.7              |       |     | ICPES  | 80NAD 01  |
| 3.0                    | 0.4   |     | PAA    | 76CHA 01  | 10               |       |     | ITNA   | 77GLU 01  |
| 3.12                   | 0.37  |     | ITNA   | 83NDI 01  | 10               | 1     |     | PAA    | 76CHA 01  |
| 3.14                   |       |     | ICPES  | 80NAD 01  | 10               | 1     |     | PAA    | 80SEG 01  |
| 3.17                   |       |     | ICPES  | 80NAD 01  | 10               | 1     | 6   | PAA    | 82SEG 01  |
| 3.17                   |       |     | ICPES  | 80NAD 01  | 10.2             | 1     |     | PAA    | 74CHA 01  |
| 3.19                   |       |     | ICPES  | 80NAD 01  | 11               | 0.4   | 6   | PAA    | 82SEG 01  |
| 3.19                   | 0.1   |     | XRF    | 79PRA 01  | 125              | 20    |     | ITNA   | 73SHE 01  |
| 3.2                    |       |     | AA     | 76WEW 01  |                  |       |     |        |           |
| 3.21                   |       |     | ICPES  | 80NAD 01  |                  |       |     |        |           |
| 3.5                    | 0.8   |     | 14NAA  | 76BLO 01  |                  |       |     |        |           |
| 3.92                   |       |     | VV     | 77GLU 01  |                  |       |     |        |           |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Sr (ug/g)</u> |       |     |        |           | <u>Ta (ng/g)</u> |       |     |        |           |
| 1.02             | 0.05  |     | ITNA   | 75NAD 02  | 170              |       |     | ITNA   | 75KLE 01  |
| 1.33             | 0.1   |     | PAA    | 74CHA 01  | 210              |       | 35  | ITNA   | 81GLA 03  |
| 91               | 9     | 12  | ITNA   | 82SUZ 02  | 210              | 20    |     | ITNA   | 77CAH 01  |
| 93               | 7     | 12  | ITNA   | 82SUZ 02  | 210              | 20    |     | ITNA   | 75RUC 01  |
| 93               | 9.2   |     | ITNA   | 73SHE 01  | 230              | 20    |     | ITNA   | 76RAG 01  |
| 99               |       | 4   | AA     | 79REI 01  | 240              |       |     | ITNA   | 78WEA 01  |
| 112              | 26    |     | ITNA   | 76RAG 01  | 240              | 10    |     | ITNA   | 75NAD 02  |
| 120              | 20    |     | NAA    | 76HAN 01  | 240              | 10    |     | ITNA   | 78NAD 02  |
| 123              |       |     | ITNA   | 75KLE 01  | 240              | 25    |     | ITNA   | 85FIL 01  |
| 125              | 26    |     | ITNA   | 78NAD 02  | 240              | 40    |     | ITNA   | 75OND 01  |
| 128              | 3     |     | XRF    | 79PRA 01  | 250              | 10    |     | ITNA   | 77MAE 01  |
| 129              |       |     | ITNA   | 75MIL 01  | 250              | 30    |     | NAA    | 76HAN 01  |
| 131              | 23    |     | ITNA   | 76STE 05  | 270              | 20    |     | ITNA   | 79ROS 03  |
| 136              | 2     | 11  | ICPES  | 85HAR 01  | 273              | 6     |     | IENA   | 77ROW 03  |
| 140              | 2.8   |     | ICPES  | 81CHU 01  | 273              | 6     | D   | NAA    | 79STE 01  |
| 140              | 15    |     | PAA    | 76CHA 01  | 273              | 9     | D   | IENA   | 77ROW 04  |
| 140              | 40    |     | ITNA   | 78LAU 02  | 290              | 50    |     | ITNA   | 78LAU 02  |
| 142              |       | 11  | ICPES  | 85HAR 01  | 300              |       |     | ITNA   | 77ROW 04  |
| 144              |       |     | XRF    | 75KLE 01  | 300              |       |     | ITNA   | 75MIL 01  |
| 145              | 9     |     | ITNA   | 75RUC 01  | 350              | 20    |     | ITNA   | 82SUZ 02  |
| 150              | 20    |     | XRF    | 79FRU 01  | 360              | 28    |     | ITNA   | 73SHE 01  |
| 151              |       | 34  | WXRF   | 82MIL 01  | 460              | 50    |     | ITNA   | 73ABE 01  |
| 151              | 4     |     | EXRF   | 79GIA 01  |                  |       |     |        |           |
| 155              | 6     |     | ITNA   | 77CAH 01  | <u>Tb (ng/g)</u> |       |     |        |           |
| 155              | 15    |     | EXRF   | 73SPA 01  | 30               |       |     | ITNA   | 73SHE 01  |
| 159              | 14    |     | IENA   | 77ROW 04  | 200              | 20    |     | ITNA   | 76RAG 01  |
| 160              | 10    |     | IENA   | 77ROW 03  | 200              | 40    |     | ITNA   | 76WEW 01  |
| 161              | 9     | D   | NAA    | 79STE 01  | 230              | 10    |     | ITNA   | 78LAU 02  |
| 161              | 9     | 5   | IENA   | 76STE 05  | 230              | 50    |     | ITNA   | 75OND 01  |
| 161              | 16    |     | ITNA   | 75OND 01  | 230              | 60    |     | ITNA   | 73ABE 01  |
| 164              | 14    |     | ITNA   | 77MAE 01  | 260              | 20    |     | ITNA   | 82SUZ 02  |
| 164              | 25    |     | ITNA   | 81WAN 01  | 270              | 10    | D   | NAA    | 79STE 01  |
| 165              | 21    | 5   | IENA   | 76STE 05  | 274              | 12    |     | IENA   | 77ROW 03  |
| 170              | 10    |     | ITNA   | 73ABE 01  | 274              | 12    | D   | IENA   | 77ROW 04  |
| 170              | 17    |     | ITNA   | 76WEW 01  | 290              | 80    |     | ITNA   | 85FIL 01  |
| 170              | 20    |     | ITNA   | 78MAC 01  | 310              | 40    |     | ITNA   | 84ODD 01  |
| 170              | 20    | 9   | ITNA   | 78LAU 02  | 340              | 20    |     | RTNA   | 84ODD 01  |
| 170              | 20    |     | ITNA   | 79FRU 01  | 400              | 20    |     | ITNA   | 78NAD 02  |
| 171              | 22    |     | ITNA   | 85FIL 01  | 400              | 20    |     | ITNA   | 75NAD 02  |
| 190              |       |     | ITNA   | 77ROW 04  | 500              |       |     | ITNA   | 75MIL 01  |
| 280              | 56    |     | OES    | 76WEW 01  | <u>Te (ng/g)</u> |       |     |        |           |
|                  |       |     |        |           | <                | 600   | L   | WXRF   | 82MIL 01  |
|                  |       |     |        |           | <                | 690   | L   | ITNA   | 82SUZ 02  |
|                  |       |     |        |           | <                | 1000  | L   | PAA    | 76CHA 01  |
|                  |       |     |        |           | 500              |       |     | FAA    | 77GLU 01  |
|                  |       |     |        |           | 600              | 40    | 35  | RTNA   | 75GLA 01  |
|                  |       |     |        |           | 1020             |       |     | PAA    | 74CHA 01  |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Th (ug/g)</u> |       |     |        |           | <u>Ti (ug/g) cont.</u> |       |     |        |           |
| 1.28             | 0.06  |     | ITNA   | 75NAD 02  | 890                    | 200   |     | PAA    | 75OND 01  |
| 1.3              | 0.1   |     | ITNA   | 78NAD 02  | 900                    | 100   |     | PAA    | 76CHA 01  |
| 2.4              | 0.2   |     | ITNA   | 76BLO 01  | 900                    | 180   |     | OES    | 76WEW 01  |
| 2.7              | 0.7   |     | EXRF   | 79GIA 01  | 920                    | 50    |     | NAA    | 76HAN 01  |
| 2.87             | 0.09  |     | ITNA   | 77ROW 04  | 930                    |       | 34  | WXRF   | 82MIL 01  |
| 2.87             | 0.24  |     | ITNA   | 79ROS 03  | 930                    |       |     | ICPES  | 80NAD 01  |
| 2.9              | 0.1   |     | ITNA   | 76RAG 01  | 930                    |       |     | ITNA   | 75KLE 01  |
| 2.9              | 0.2   |     | ITNA   | 85FIL 01  | 946                    | 24    |     | ICPES  | 81CHU 01  |
| 3                |       | 34  | WXRF   | 82MIL 01  | 951                    | 53    |     | EXRF   | 79GIA 01  |
| 3                |       |     | ITNA   | 75KLE 01  | 960                    |       |     | ICPES  | 80NAD 01  |
| 3                | 0.2   |     | ITNA   | 78LAU 02  | 960                    |       |     | ICPES  | 80NAD 01  |
| 3.1              | 0.2   |     | ITNA   | 75OND 01  | 972                    |       |     | ICPES  | 80NAD 01  |
| 3.1              | 0.2   |     | ITNA   | 73SHE 01  | 973                    | 50    |     | PAA    | 74CHA 01  |
| 3.12             | 0.1   | D   | IENA   | 77ROW 04  | 980                    | 60    |     | ITNA   | 79GRE 01  |
| 3.12             | 0.1   |     | IENA   | 77ROW 03  | 995                    | 100   |     | ITNA   | 78MAC 01  |
| 3.12             | 0.1   | D   | NAA    | 79STE 01  | 1000                   | 260   |     | ITNA   | 76RAG 01  |
| 3.2              |       | 35  | ITNA   | 81GLA 03  | 1028                   | 30    |     | AA     | 79ROS 03  |
| 3.2              |       |     | ITNA   | 75MIL 01  | 1060                   |       | 35  | NAA    | 81GLA 03  |
| 3.2              | 0.1   |     | ITNA   | 77MAE 01  | 1075                   | 100   |     | ITNA   | 75OND 01  |
| 3.2              | 0.2   |     | ITNA   | 79GRE 01  | 1100                   |       |     | ITNA   | 77GLU 01  |
| 3.2              | 0.3   |     | ITNA   | 76WEW 01  | 1100                   | 100   |     | ITNA   | 81WAN 01  |
| 3.2              | 0.5   |     | NAA    | 76HAN 01  | 1100                   | 110   |     | ITNA   | 76WEW 01  |
| 3.3              | 0.6   |     | ITNA   | 81WAN 01  | 1100                   | 200   |     | ITNA   | 79FRU 01  |
| 3.4              | 0.3   |     | ITNA   | 79FRU 01  | 1100                   | 200   |     | ITNA   | 73ABE 01  |
| 3.4              | 0.6   |     | ITNA   | 73ABE 01  | 1160                   | 50    |     | XRF    | 79PRA 01  |
| 3.45             | 0.1   |     | GAMMA  | 73ABE 01  | 1200                   | 200   |     | ITNA   | 78LAU 02  |
| 3.45             | 0.1   |     | GAMMA  | 75OND 01  | 1300                   | 200   |     | XRF    | 79FRU 01  |
| 3.5              | 0.6   |     | ITNA   | 77CAH 01  | 1312                   | 150   |     | ITNA   | 73SHE 01  |
| 3.65             | 0.49  |     | ITNA   | 75RUC 01  | 1550                   | 130   |     | ITNA   | 82SUZ 02  |
| 4.1              | 0.1   | 12  | ITNA   | 82SUZ 02  | <u>Tl (ng/g)</u>       |       |     |        |           |
| 4.6              | 0.1   | 12  | ITNA   | 82SUZ 02  | 500                    | 100   |     | PAA    | 80SEG 01  |
| 4.7              |       |     | DNA    | 75MIL 01  | 500                    | 100   | 6   | PAA    | 82SEG 01  |
| <u>Ti (ug/g)</u> |       |     |        |           | 512                    | 60    |     | PAA    | 74CHA 01  |
| 425              | 25    |     | ICPES  | 84NAD 01  | 520                    | 60    |     | PAA    | 76CHA 01  |
| 680              |       |     | EXRF   | 82KEE 01  | 590                    | 60    |     | SSMS   | 77PAU 01  |
| 690              |       | 4   | AA     | 79REI 01  | 600                    | 100   | 6   | PAA    | 82SEG 01  |
| 790              |       |     | POL    | 74MAI 01  | 600                    | 200   |     | SSMS   | 77DON 01  |
| 800              |       |     | AA     | 76WEW 01  | 610                    | 37    | 8   | SSMS   | 80KOP 01  |
| 800              |       |     | ITNA   | 78WEA 01  | <u>Tm (ng/g)</u>       |       |     |        |           |
| 810              | 20    | 11  | ICPES  | 85HAR 01  | 110                    |       |     | FAA    | 82GUP 02  |
| 839              | 172   |     | ITNA   | 75NAD 02  | 300                    |       |     | ITNA   | 75MIL 01  |
| 840              | 200   |     | ITNA   | 78NAD 02  | 300                    |       |     | ITNA   | 77GLU 01  |
| 860              |       | 11  | ICPES  | 85HAR 01  | 300                    | 20    |     | RTNA   | 84ODD 01  |
| 885              | 150   |     | ITNA   | 76BLO 01  | 300                    | 40    |     | ITNA   | 84ODD 01  |
| 890              | 35    | D   | TCGS   | 80AND 01  |                        |       |     |        |           |
| 890              | 35    |     | TCGS   | 79FAI 01  |                        |       |     |        |           |
| 890              | 50    | D   | NAA    | 79STE 01  |                        |       |     |        |           |
| 890              | 50    |     | ITNA   | 76STE 05  |                        |       |     |        |           |
| 890              | 50    |     | ITNA   | 77ROW 03  |                        |       |     |        |           |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc            | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|-----------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>U (ug/g)</u> |       |     |        |           | <u>V (ug/g) cont.</u> |       |     |        |           |
| 0.98            | 0.078 |     | ITNA   | 73SHE 01  | 32.9                  | 1.7   |     | ITNA   | 83NDI 01  |
| 1.1             | 0.08  | 35  | RTNA   | 75GLA 01  | 33                    |       |     | ICPES  | 80NAD 01  |
| 1.19            |       |     | DNA    | 85GAU 04  | 33                    | 1     |     | ITNA   | 76BLO 01  |
| 1.2             | 0.05  |     | IDMS   | 78CAR 02  | 33                    | 3     |     | ITNA   | 78NAD 02  |
| 1.2             | 0.1   |     | ITNA   | 78NAD 02  | 33                    | 3     |     | ITNA   | 78MAC 01  |
| 1.2             | 0.1   |     | ITNA   | 75NAD 02  | 33                    | 4     |     | ITNA   | 73ABE 01  |
| 1.21            |       |     | IDMS   | 75KLE 01  | 33                    | 6     |     | ITNA   | 80BUA 01  |
| 1.24            | 0.05  |     | ITNA   | 76RAG 01  | 33.6                  |       |     | AA     | 78GUI 01  |
| 1.25            | 0.06  |     | ITNA   | 82SUZ 02  | 33.9                  |       | 11  | ICPES  | 85HAR 01  |
| 1.26            |       |     | ITNA   | 75KLE 01  | 33.9                  | 3     |     | PAA    | 74CHA 01  |
| 1.3             | 0.1   | 6   | PAA    | 82SEG 01  | 34                    |       |     | ITNA   | 84CLE 01  |
| 1.3             | 0.1   |     | PAA    | 80SEG 01  | 34                    |       |     | ICPES  | 80NAD 01  |
| 1.33            | 0.05  |     | DNA    | 84GLA 02  | 34                    | 3     |     | PAA    | 76CHA 01  |
| 1.34            | 0.5   |     | ITNA   | 78MAC 01  | 35                    |       |     | ITNA   | 78WEA 01  |
| 1.35            |       |     | ITNA   | 78WEA 01  | 35                    | 2.9   |     | ITNA   | 76STE 05  |
| 1.37            | 0.08  |     | ITNA   | 74WEA 01  | 35                    | 2.9   | D   | NAA    | 79STE 01  |
| 1.4             |       |     | ITNA   | 81WAN 01  | 35                    | 2.9   |     | ITNA   | 77ROW 03  |
| 1.4             | 0.1   | 6   | PAA    | 82SEG 01  | 35                    | 4     |     | ITNA   | 79FRU 01  |
| 1.4             | 0.4   |     | ITNA   | 85FIL 01  | 35.2                  | 1.5   |     | AA     | 79ROS 03  |
| 1.41            | 0.07  |     | GAMMA  | 73ABE 01  | 35.8                  | 3.4   |     | ITNA   | 81WAN 01  |
| 1.41            | 0.07  |     | GAMMA  | 75OND 01  | 35.9                  | 0.8   | 11  | AA     | 82LIN 03  |
| 1.41            | 0.07  | D   | NAA    | 74OND 01  | 36                    |       |     | AA     | 76WEW 01  |
| 1.43            |       |     | DNA    | 75MIL 01  | 36                    | 2     |     | ITNA   | 79GRE 01  |
| 1.45            | 0.04  | D   | NAA    | 79STE 01  | 36                    | 3     |     | ITNA   | 75OND 01  |
| 1.45            | 0.04  |     | IENA   | 77ROW 04  | 36                    | 3     | D   | NAA    | 74OND 01  |
| 1.46            | 0.02  |     | IENA   | 76STE 05  | 36                    | 4     |     | ITNA   | 76WEW 01  |
| 1.46            | 0.02  | D   | NAA    | 79STE 01  | 36                    | 4     |     | ITNA   | 73SHE 01  |
| 1.46            | 0.04  |     | IENA   | 77ROW 03  | 36.2                  |       |     | FAA    | 78GUI 01  |
| 1.46            | 0.35  |     | ITNA   | 75RUC 01  | 37                    | 3     |     | ITNA   | 75RIC 01  |
| 1.49            |       | 35  | DNA    | 81GLA 03  | 37.6                  | 1.4   |     | ITNA   | 77MAE 01  |
| 1.5             |       |     | ITNA   | 75MIL 01  | 37.9                  | 1.7   | 11  | AA     | 82LIN 03  |
| 1.5             | 0.1   | 13  | PAA    | 81SEG 01  | 38                    | 1.2   |     | ICPES  | 81CHU 01  |
| 1.52            | 0.11  |     | ITNA   | 76STE 05  | 38                    | 4     |     | XRF    | 79FRU 01  |
| 1.6             | 0.2   | 13  | PAA    | 81SEG 01  | 40                    | 3     |     | ITNA   | 75KLE 01  |
| 1.6             | 0.2   |     | NAA    | 76HAN 01  | 41                    | 10    |     | ITNA   | 76RAG 01  |
| 1.6             | 0.2   |     | ITNA   | 79FRU 01  | 42                    | 2     |     | ITNA   | 82SUZ 02  |
| 2               |       | 34  | WXRF   | 82MIL 01  | 43                    |       | 4   | AA     | 79REI 01  |
| 6               |       |     | AA     | 76WEW 01  | 50                    |       |     | ITNA   | 77GLU 01  |
|                 |       |     |        |           | 50                    | 10    |     | XRF    | 79PRA 01  |
| <u>V (ug/g)</u> |       |     |        |           | <u>W (ng/g)</u>       |       |     |        |           |
| 24              | 8     |     | EXRF   | 79GIA 01  |                       |       |     |        |           |
| 30              | 6     | 35  | ITNA   | 81GLA 03  | 450                   | 90    |     | ITNA   | 81WAN 01  |
| 31              | 4     |     | ICPES  | 84NAD 01  | 630                   | 60    |     | ITNA   | 77MAE 01  |
| 31.5            | 2.6   | 11  | AA     | 82LIN 03  | 650                   | 150   |     | ITNA   | 76RAG 01  |
| 32              |       | 34  | WXRF   | 82MIL 01  | 710                   | 70    | D   | NAA    | 79STE 01  |
| 32              | 1.3   |     | OES    | 76WEW 01  | 710                   | 70    |     | IENA   | 77ROW 04  |
| 32              | 4     |     | ITNA   | 78LAU 02  | 710                   | 80    |     | ITNA   | 82SUZ 02  |
| 32.5            | 1.5   |     | NAA    | 76HAN 01  | 740                   | 300   |     | ITNA   | 75RUC 01  |
| 32.7            | 0.6   | 11  | ICPES  | 85HAR 01  |                       |       |     |        |           |
| 32.7            | 3.4   |     | ITNA   | 75NAD 02  |                       |       |     |        |           |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                  | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>W (ng/g) cont.</u> |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 750                   |       |     | ITNA   | 78WEA 01  | 21               |       | 11  | ICPES  | 85HAR 01  |
| 750                   | 100   |     | IENA   | 77ROW 03  | 30               | 10    |     | ITNA   | 75OND 01  |
| 750                   | 170   |     | ITNA   | 75OND 01  | 30               | 10    | D   | NAA    | 74OND 01  |
| 780                   | 80    |     | ITNA   | 79GRE 01  | 32               | 3     |     | ITNA   | 75NAD 02  |
| 790                   | 170   |     | IENA   | 76STE 05  | 32               | 3     |     | XRF    | 79FRU 01  |
| 870                   | 200   |     | ITNA   | 77CAH 01  | 32               | 3     |     | ITNA   | 78NAD 02  |
| 1900                  | 800   |     | ITNA   | 73SHE 01  | 32               | 8     |     | SSMS   | 77DON 01  |
|                       |       |     |        |           | 33               | 3     | 9   | ITNA   | 78LAU 02  |
|                       |       |     |        |           | 34               |       |     | XRF    | 75KLE 01  |
|                       |       |     |        |           | 34               |       | 4   | AA     | 79REI 01  |
|                       |       |     |        |           | 34               |       |     | ITNA   | 78WEA 01  |
| 6.6                   |       | 11  | ICPES  | 85HAR 01  | 34               | 1     |     | EXRF   | 81KIN 01  |
| 7                     |       |     | AA     | 82GUP 02  | 34               | 9     |     | ITNA   | 77CAH 01  |
| 7                     | 1     |     | XRF    | 79PRA 01  | 34               | 17    |     | ITNA   | 76WEW 01  |
| 7.4                   |       | 34  | WXRF   | 82MIL 01  | 34.9             | 1.6   | 11  | AA     | 82LIN 03  |
| 7.6                   | 0.81  |     | OES    | 76WEW 01  | 35               | 2     | 12  | ITNA   | 82SUZ 02  |
| 7.9                   | 0.6   |     | EXRF   | 79GIA 01  | 35               | 5     |     | ITNA   | 77JER 01  |
| 8                     |       |     | OES    | 82GUP 02  | 35.7             | 9.9   |     | EXRF   | 79GIA 01  |
| 8.3                   | 0.2   | 11  | ICPES  | 85HAR 01  | 36               |       |     | ICPES  | 80NAD 01  |
|                       |       |     |        |           | 36               | 0.6   |     | RTNA   | 74ORV 01  |
|                       |       |     |        |           | 36               | 7     | 6   | PAA    | 82SEG 01  |
|                       |       |     |        |           | 36.6             | 1.4   |     | EXRF   | 73SPA 01  |
|                       |       |     |        |           | 36.9             | 1.1   | 11  | AA     | 82LIN 03  |
|                       |       |     |        |           | 37               |       |     | AA     | 76WEW 01  |
|                       |       |     |        |           | 37               | 3     |     | PAA    | 76CHA 01  |
|                       |       |     |        |           | 37               | 3     |     | PAA    | 77JER 01  |
|                       |       |     |        |           | 37               | 3     |     | XRF    | 79PRA 01  |
|                       |       |     |        |           | 37               | 3     |     | ITNA   | 79FRU 01  |
|                       |       |     |        |           | 37               | 6     |     | IENA   | 77ROW 04  |
|                       |       |     |        |           | 37               | 10    |     | NAA    | 76HAN 01  |
|                       |       |     |        |           | 37.2             | 17.4  |     | ITNA   | 75RUC 01  |
|                       |       |     |        |           | 37.5             | 2.8   |     | PAA    | 74CHA 01  |
|                       |       |     |        |           | 38               |       | 34  | WXRF   | 82MIL 01  |
|                       |       |     |        |           | 38               | 5     |     | SSMS   | 77PAU 01  |
|                       |       |     |        |           | 38.1             | 0.8   |     | AF     | 75EPS 01  |
|                       |       |     |        |           | 38.1             | 1.4   |     | RTNA   | 77JER 01  |
|                       |       |     |        |           | 38.4             | 0.9   |     | AA     | 74RAI 01  |
|                       |       | D   | NAA    | 79STE 01  | 38.4             | 1     |     | AA     | 75EPS 01  |
|                       |       | 5   | ITNA   | 77ROW 04  | 38.4             |       |     | AA     | 78GUI 01  |
|                       |       |     |        |           | 38.5             |       |     |        |           |
|                       |       |     |        |           | 39               |       |     | ICPES  | 80NAD 01  |
|                       |       | 5   | ITNA   | 77ROW 04  | 39               |       |     | EXRF   | 82KEE 01  |
|                       |       |     | OES    | 76WEW 01  | 39               | 0.8   |     | AF     | 75EPS 01  |
|                       |       |     |        |           | 39               | 1.4   |     | RTNA   | 77JER 01  |
|                       |       |     |        |           | 39               | 1     |     | FAA    | 74TAL 01  |
|                       |       |     |        |           | 39               | 1     | 7   | AA     | 73TAL 01  |
|                       |       |     |        |           | 39               | 2     | 11  | ICPES  | 85HAR 01  |
|                       |       |     |        |           | 39               | 2     | 12  | ITNA   | 82SUZ 02  |
|                       |       |     |        |           | 39               | 3     | 6   | PAA    | 82SEG 01  |
|                       |       |     |        |           | 39               | 3     |     | PAA    | 80SEG 01  |
|                       |       |     |        |           | 39               | 6     |     | ITNA   | 77ROW 03  |
|                       |       |     |        |           | 39               | 6     | D   | NAA    | 79STE 01  |
|                       |       |     |        |           | 39               | 6     | D   | ITNA   | 77ROW 04  |
|                       |       |     |        |           | 40               | 1.2   |     | ICPES  | 81CHU 01  |

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

| Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g) cont.</u> |       |     |        |           |
| 40                     | 2     |     | ICPES  | 84NAD 01  |
| 40.8                   | 4     |     | ITNA   | 81WAN 01  |
| 42                     |       |     | ITNA   | 77GLU 01  |
| 43                     | 2     |     | ITNA   | 76RAG 01  |
| 45                     | 17    |     | OES    | 76WEW 01  |
| 50                     | 10    |     | ITNA   | 78LAU 02  |
| 52                     | 4     |     | ITNA   | 78MAC 01  |
| 58                     | 7     |     | ITNA   | 77MAE 01  |
| <u>Zr (ug/g)</u>       |       |     |        |           |
| 1.56                   | 0.14  |     | PAA    | 74CHA 01  |
| 16                     | 2     |     | PAA    | 76CHA 01  |
| 25                     | 0.75  |     | ICPES  | 81CHU 01  |
| 25                     | 3     |     | OES    | 76WEW 01  |
| 28                     | 24    |     | ITNA   | 76RAG 01  |
| 33                     | 4     |     | EXRF   | 79GIA 01  |
| 38                     |       | 34  | WXRF   | 82MIL 01  |
| 40                     | 4     | 9   | ITNA   | 78LAU 02  |
| 41                     |       |     | ITNA   | 75MIL 01  |
| 45                     |       |     | ITNA   | 75KLE 01  |
| 46                     |       |     | AA     | 76WEW 01  |
| 85                     | 9     | 12  | ITNA   | 82SUZ 02  |
| 90                     | 10    | 12  | ITNA   | 82SUZ 02  |

TABLE 1632A-1: COMPILED DATA FOR NBS SRM 1632A TRACE ELEMENTS IN COAL (revised 3/1/86)

| ELEMENT | UNITS | NBS<br>Mean ± SD | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE       | AA              |     | NAA              |                 | ICPES          |        | XRF       |      | OTHER METHODS |               |              |
|---------|-------|------------------|----------------------------|--------|-------------|-----------------|-----|------------------|-----------------|----------------|--------|-----------|------|---------------|---------------|--------------|
|         |       |                  |                            |        |             | Mean ± SD       | (n) | Mean ± SD        | (n)             | Mean ± SD      | (n)    | Mean ± SD | (n)  | Method        | (n)           | Method       |
| ASH     | %     | ---              | 21.84 ± 0.15 (5)           | 21.8   | 21.7 - 22.0 | 22.0            | (1) | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Ag      | ng/g  | ---              | 300                        | ---    | ---         | ---             | (1) | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Al      | %     | 3.07             | 2.95 ± 0.10 (25)           | 2.97   | 2.74 - 3.10 | 2.92 ± 0.14 (5) | --- | 2.97 ± 0.08 (12) | 2.98 ± 0.08 (4) | 2.88           | (2)    | 2.88      | (2)  | TCGS          | 3.33 (1) CPAA |              |
| As      | ug/g  | 9.3 ± 1.0        | 9.2 ± 0.5 (27)             | 9.21   | 7.6 - 10.2  | 9.3 ± 0.5 (10)  | --- | 9.3 ± 0.7 (13)   | 8.88 (1)        | 7.8            | (2)    | 7.8       | (2)  | PAA           | 9.27 (1) AF   |              |
| Au      | ng/g  | ---              | 3.0                        | ---    | ---         | ---             | (1) | 3.0              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| B       | ug/g  | ---              | 53.2 ± 1.5 (7)             | 53     | 50.9 - 55   | ---             | --- | 52               | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Ba      | ug/g  | ---              | 120 ± 15 (15)              | 120    | 97 - 150    | ---             | --- | 122 ± 17 (11)    | 111 ± 9 (3)     | 125            | (1)    | 125       | (1)  | ---           | ---           |              |
| Be      | ug/g  | ---              | 1.61 ± 0.11 (5)            | 1.63   | 1.48 - 1.73 | 1.60 ± 0.11 (6) | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Bi      | ug/g  | ---              | < 1                        | ---    | ---         | ---             | --- | ---              | ---             | < 1            | ---    | ---       | ---  | ---           | ---           |              |
| Br      | ug/g  | ---              | 41 ± 2 (16)                | 42     | 38 - 44.9   | ---             | --- | 41 ± 2 (14)      | ---             | 42             | (1)    | 42        | (1)  | ISE           | ---           |              |
| C       | %     | ---              | 64.4 ± 3.9 (5)             | 62.7   | 61.3 - 71   | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| C-Fixed | %     | ---              | 43                         | ---    | ---         | 43              | (1) | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Ca      | ug/g  | ---              | 2410 ± 170 (20)            | 2400   | 2100 - 2700 | 2400 ± 140 (6)  | --- | 2430 ± 180 (9)   | 2470 ± 190 (4)  | 2300           | (1)    | 2300      | (1)  | PAA           | 2400 (1) TCGS |              |
| Cd      | ng/g  | 170 ± 20         | 178 ± 23 (6)               | 170    | 150 - 210   | 170 ± 10 (3)    | --- | 200              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Ce      | ug/g  | 30               | 29 ± 2 (16)                | 28.5   | 25.7 - 32   | ---             | --- | 29 ± 2 (12)      | 29              | (2)            | 28.8   | (2)       | 28.8 | (2)           | ---           | ---          |
| Cl      | ug/g  | ---              | 756 ± 30 (16)              | 766    | 700 - 800   | ---             | --- | 771 ± 17 (7)     | ---             | 730            | (2)    | 730       | (2)  | IC            | 775 (2) TCGS  |              |
| Cl      | ug/g  | ---              | ---                        | ---    | ---         | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Co      | ug/g  | 6.8              | 6.7 ± 0.4 (23)             | 6.6    | 5.86 - 7.5  | 6.8 ± 0.5 (5)   | --- | 6.7 ± 0.5 (15)   | 6.6             | (2)            | 6.0    | (1)       | ---  | ---           | ---           |              |
| Cr      | ug/g  | 34.3 ± 1.5       | 34 ± 2 (27)                | 33.8   | 30 - 40     | 33 ± 4 (7)      | --- | 34.0 ± 1.6 (14)  | 31.6            | (2)            | 37 ± 3 | (3)       | 37   | (1)           | DCPES         | 39 (1) AE&AF |
| Cs      | ug/g  | 2.4              | 2.3 ± 0.2 (13)             | 2.3    | 1.9 - 2.5   | ---             | --- | 2.24 ± 0.20 (12) | ---             | 2.5            | (1)    | ---       | ---  | ---           | ---           |              |
| Cu      | ug/g  | 16.5 ± 1         | 15.9 ± 0.8 (18)            | 16     | 14 - 17.2   | 16.1 ± 0.7 (10) | --- | 15.4             | 17 ± 2 (4)      | 15.8 ± 1.2 (3) | ---    | 14        | (1)  | DCPES         | ---           |              |
| Dy      | ug/g  | ---              | 2.06 ± 0.14 (10)           | 2.11   | 1.83 - 2.2  | ---             | --- | 2.05 ± 0.15 (9)  | 2.1             | (1)            | ---    | ---       | ---  | ---           | ---           |              |
| Er      | ug/g  | ---              | 0.91                       | ---    | ---         | ---             | --- | ---              | 0.91            | (1)            | ---    | ---       | ---  | ---           | ---           |              |
| Fu      | ng/g  | 540              | 520 ± 40 (15)              | 510    | 460 - 610   | ---             | --- | 530 ± 40 (14)    | 490             | (1)            | ---    | ---       | ---  | ---           | ---           |              |
| F       | ug/g  | ---              | 160 ± 50 (8)               | 176    | 84 - 210    | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| F       | ug/g  | ---              | ---                        | ---    | ---         | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Fe      | %     | 1.11 ± 0.02      | 1.11 ± 0.03 (28)           | 1.11   | 1.03 - 1.17 | 1.13 ± 0.04 (6) | --- | 1.11 ± 0.03 (15) | 1.10 ± 0.02 (5) | 1.07           | (1)    | 1.07      | (1)  | ---           | ---           |              |
| Ga      | ug/g  | 8.49             | 8.0 ± 0.4 (7)              | 8.0    | 7.2 - 8.5   | 8.2             | (1) | 8.0 ± 0.3 (6)    | ---             | 7.8            | (2)    | 7.8       | (2)  | ---           | ---           |              |
| Gd      | ug/g  | ---              | 2.6 ± 0.6 (6)              | 2.4    | 1.9 - 3.4   | ---             | --- | 3.4              | 2.4             | (1)            | ---    | ---       | ---  | ---           | ---           |              |
| Ge      | ug/g  | ---              | 2.5                        | ---    | ---         | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| H       | %     | ---              | 4.1 ± 0.4 (5)              | 4.17   | 3.68 - 4.59 | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| H2O-    | %     | ---              | 2.2 ± 0.5 (5)              | 2.6    | 1.6 - 2.6   | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| H2O-    | %     | ---              | ---                        | ---    | ---         | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Hf      | ug/g  | 1.6              | 1.62 ± 0.15 (11)           | 1.65   | 1.43 - 1.9  | ---             | --- | 1.62 ± 0.15 (11) | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Hg      | ng/g  | 130 ± 30         | 136 ± 19 (10)              | 129    | 118 - 170   | 136 ± 20 (5)    | --- | 137 ± 22 (4)     | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Ho      | ng/g  | ---              | 360                        | ---    | 340 - 380   | ---             | --- | 340              | 380             | (1)            | ---    | ---       | ---  | ---           | ---           |              |
| I       | ug/g  | ---              | 1.80 ± 0.15 (4)            | 1.77   | 1.63 - 2.0  | ---             | --- | 1.80 ± 0.15 (4)  | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| In      | ng/g  | ---              | 38 ± 2 (5)                 | 36     | 36 - 40.5   | ---             | --- | 38 ± 2 (5)       | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| K       | ug/g  | ---              | 4110 ± 200 (20)            | 4100   | 3700 - 4523 | 4175 ± 50 (6)   | --- | 4090 ± 200 (10)  | 4310 ± 370 (4)  | 3700           | (1)    | 3700      | (1)  | TCGS          | 3.69 (2) TCGS |              |
| K-40    | pc1/g | ---              | 2.7                        | ---    | ---         | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| La      | ug/g  | ---              | 15 ± 2 (18)                | 15     | 10.9 - 19   | ---             | --- | 14 ± 3 (15)      | 15.1 ± 0.6 (3)  | 19             | (1)    | ---       | ---  | ---           | ---           |              |
| Li      | ug/g  | ---              | 39 ± 6 (4)                 | 36.2   | 35 - 47     | 36.2            | (1) | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Lu      | ng/g  | ---              | 170 ± 15 (12)              | 174    | 134 - 190   | ---             | --- | 176 ± 7 (10)     | 150             | (1)            | ---    | ---       | ---  | ---           | ---           |              |
| Hg      | ug/g  | ---              | 1150 ± 225 (13)            | 1052   | 870 - 1714  | 1100 ± 150 (4)  | --- | 1425 ± 125 (6)   | 980 ± 80 (4)    | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Mn      | ug/g  | 28 ± 2           | 29 ± 2 (29)                | 29     | 26 - 34     | 29.3 ± 1.8 (8)  | --- | 29.8 ± 2.2 (12)  | 30 ± 3 (4)      | 24             | (2)    | 24        | (2)  | DCPES         | 29 (1) TCGS   |              |
| Mn      | ug/g  | ---              | ---                        | ---    | ---         | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |
| Mn      | ug/g  | ---              | ---                        | ---    | ---         | ---             | --- | ---              | ---             | ---            | ---    | ---       | ---  | ---           | ---           |              |

TABLE 1632A-1: COMPILED DATA FOR NBS SRM 1632A TRACE ELEMENTS IN COAL (cont.)

| ELEMENT | UNITS | NBS<br>Mean ± SD | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE        | AA              |                  | NAA             |                | ICPES          |                | XRF           |            | OTHER METHODS  |  |
|---------|-------|------------------|----------------------------|--------|--------------|-----------------|------------------|-----------------|----------------|----------------|----------------|---------------|------------|----------------|--|
|         |       |                  |                            |        |              | Mean ± SD (n)   | Mean ± SD (n)    | Mean ± SD (n)   | Mean ± SD (n)  | Mean ± SD (n)  | SD (n)         | Mean ± SD (n) | Method (n) |                |  |
| Mo      | ug/g  | ---              | 3.85 (2)                   | ---    | 2 - 5.7      | ---             | ---              | ---             | 5.7 (1)        | 2.0 (1)        | ---            | ---           | ---        | ---            |  |
| N       | %     | ---              | 1.25 ± 0.04 (7)            | 1.27   | 1.19 - 1.30  | ---             | ---              | ---             | ---            | ---            | ---            | ---           | 1.24 (2)   | 1.28 (1) POT   |  |
| N       | %     | ---              | ---                        | ---    | ---          | ---             | ---              | ---             | ---            | ---            | ---            | ---           | 1.72 (1)   | 1.19 (1) CHEML |  |
| N       | %     | ---              | ---                        | ---    | ---          | ---             | ---              | ---             | ---            | ---            | ---            | ---           | 1.27 (1)   | 1.28 (2) CB    |  |
| Na      | ug/g  | ---              | 828 ± 77 (25)              | 825    | 680 - 1000   | 840 ± 36 (3)    | 800 ± 80 (15)    | 856 ± 54 (4)    | 882 (2)        | 882 (2)        | 915 (1)        | ---           | ---        | ---            |  |
| Nb      | ug/g  | ---              | 4.0 (1)                    | ---    | ---          | ---             | ---              | ---             | 4.0 (1)        | ---            | ---            | ---           | ---        | ---            |  |
| Nd      | ug/g  | ---              | 12 ± 2 (8)                 | 11.8   | 10 - 15.6    | ---             | 13 ± 2 (5)       | 13 (1)          | 11 (1)         | 11 (1)         | 11.8 (1)       | ---           | ---        | ---            |  |
| Ni      | ug/g  | 19.4 ± 1         | 18.5 ± 2.0 (21)            | 19     | 15.7 - 23    | 18.6 ± 1.5 (10) | 21 (2)           | 17.3 ± 1.6 (4)  | 19 ± 3 (3)     | 19 ± 3 (3)     | 16 (1)         | ---           | ---        | ---            |  |
| Ni      | ug/g  | ---              | ---                        | ---    | ---          | ---             | ---              | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| O       | %     | ---              | 18.8 ± 0.8 (3)             | 18.4   | 18.31 - 19.8 | ---             | ---              | ---             | ---            | ---            | 18.8 ± 0.8 (3) | ---           | ---        | ---            |  |
| P       | ug/g  | ---              | 250 ± 40 (6)               | 205    | 85 - 285     | 280 (1)         | ---              | 190 ± 90 (5)    | 240 (2)        | 240 (2)        | ---            | ---           | ---        | ---            |  |
| Pb      | ug/g  | 12.4 ± 0.6       | 12.2 ± 1.4 (20)            | 12.1   | 8.3 - 15.3   | 12.4 ± 0.7 (11) | ---              | 9.6 ± 2.5 (3)   | 13 ± 4 (4)     | 13 ± 4 (4)     | 11.2 (1)       | ---           | ---        | ---            |  |
| Pb      | ug/g  | ---              | ---                        | ---    | ---          | ---             | ---              | ---             | ---            | ---            | 12 (1)         | ---           | ---        | ---            |  |
| Pb-210  | pci/g | ---              | 0.58 ± 0.19 (3)            | 0.5    | 0.449 - 0.80 | ---             | ---              | ---             | ---            | ---            | 0.474 (2)      | ---           | ---        | ---            |  |
| Po-210  | pci/g | ---              | 0.50 (1)                   | ---    | ---          | ---             | ---              | ---             | ---            | ---            | 0.50 (1)       | ---           | ---        | ---            |  |
| Pr      | ug/g  | ---              | 3.15 (2)                   | ---    | 3.0 - 3.3    | ---             | ---              | 3.3 (1)         | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Ra-226  | pci/g | ---              | 0.41 (1)                   | ---    | ---          | ---             | ---              | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Rb      | ug/g  | 31               | 30 ± 2 (13)                | 29     | 26.9 - 34    | ---             | 29.2 ± 1.6 (10)  | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| S       | %     | 1.64             | 1.55 ± 0.05 (13)           | 1.57   | 1.48 - 1.62  | ---             | 1.5 (2)          | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| S       | %     | ---              | ---                        | ---    | ---          | ---             | ---              | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Sb      | ng/g  | 580              | 600 ± 45 (16)              | 600    | 460 - 690    | 587 ± 23 (3)    | 600 ± 50 (13)    | ---             | 1000 (1)       | 1000 (1)       | ---            | ---           | ---        | ---            |  |
| Sc      | ug/g  | 6.3              | 6.3 ± 0.3 (17)             | 6.2    | 5.7 - 6.9    | ---             | 6.3 ± 0.3 (15)   | 5.7 (1)         | 5.8 (2)        | 5.8 (2)        | ---            | ---           | ---        | ---            |  |
| Se      | ug/g  | 2.6 ± 0.7        | 2.7 ± 0.2 (19)             | 2.65   | 2.4 - 3.12   | 2.7 ± 0.2 (6)   | 2.8 ± 0.2 (10)   | ---             | 2.4 (1)        | 2.4 (1)        | 2.59 (1)       | ---           | ---        | ---            |  |
| Si      | %     | ---              | 5.87 ± 0.22 (9)            | 5.912  | 5.5 - 6.21   | 5.80 ± 0.37 (3) | ---              | 5.89 ± 0.20 (3) | 5.92 (1)       | 5.92 (1)       | 5.92 (2)       | ---           | ---        | ---            |  |
| Sm      | ug/g  | ---              | 2.4 ± 0.3 (16)             | 2.5    | 1.9 - 2.8    | ---             | 2.6 ± 0.2 (12)   | 2.6 (1)         | 2.0 (1)        | 2.0 (1)        | 2.1 (2)        | ---           | ---        | ---            |  |
| Sn      | ug/g  | ---              | 4 ± 4 (3)                  | 2.3    | 1.0 - 8.08   | 5.19 (2)        | ---              | ---             | 1.0 (1)        | 1.0 (1)        | ---            | ---           | ---        | ---            |  |
| Sr      | ug/g  | ---              | 85 ± 6 (10)                | 83.6   | 76.4 - 95.5  | ---             | 84 ± 6 (8)       | 72 (2)          | 90 (1)         | 90 (1)         | ---            | ---           | ---        | ---            |  |
| Ta      | ng/g  | ---              | 420 ± 40 (8)               | 400    | 360 - 460    | ---             | 420 ± 40 (8)     | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Tb      | ng/g  | ---              | 311 ± 17 (9)               | 310    | 290 - 330    | ---             | 312 ± 18 (8)     | 300 (1)         | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Te      | ng/g  | ---              | 500 (1)                    | ---    | ---          | 500 (1)         | ---              | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Th      | ug/g  | 4.5 ± 0.1        | 4.5 ± 0.2 (16)             | 4.48   | 4.2 - 5.0    | ---             | 4.49 ± 0.22 (14) | 4.4 (1)         | 5.0 (1)        | 5.0 (1)        | ---            | ---           | ---        | ---            |  |
| Th-228  | pci/g | ---              | 0.499 (1)                  | ---    | ---          | ---             | ---              | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Th-230  | pci/g | ---              | 0.452 (1)                  | ---    | ---          | ---             | ---              | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Th-232  | pci/g | ---              | 0.442 (2)                  | ---    | 0.40 - 0.484 | ---             | ---              | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Ti      | ug/g  | 1750             | 1630 ± 130 (21)            | 1620   | 1310 - 1900  | 1760 (1)        | 1630 ± 70 (8)    | 1540 ± 160 (5)  | 1830 ± 280 (4) | 1830 ± 280 (4) | 1850 (2)       | ---           | ---        | ---            |  |
| Tl      | ug/g  | ---              | < 1                        | ---    | ---          | ---             | ---              | ---             | < 1            | < 1            | ---            | ---           | ---        | ---            |  |
| Tm      | ng/g  | ---              | 390 (2)                    | ---    | 380 - 400    | ---             | 380 (1)          | 400 (1)         | ---            | ---            | ---            | ---           | ---        | ---            |  |
| U       | ug/g  | 1.28 ± 0.02      | 1.26 ± 0.08 (23)           | 1.28   | 1.1 - 1.45   | ---             | 1.26 ± 0.08 (22) | 1.3 (1)         | 1.0 (1)        | 1.0 (1)        | ---            | ---           | ---        | ---            |  |
| U-234   | pci/g | ---              | 0.448 (1)                  | ---    | ---          | ---             | ---              | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| U-235   | pci/g | ---              | 0.0228 (1)                 | ---    | ---          | ---             | ---              | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| U-238   | pci/g | ---              | 0.444 (1)                  | ---    | ---          | ---             | ---              | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| V       | ug/g  | 44 ± 3           | 44 ± 2 (27)                | 44     | 39 - 49.6    | 44 ± 3 (10)     | 44 ± 3 (11)      | 42 ± 2 (3)      | 44.5 (2)       | 44.5 (2)       | 47 (2)         | ---           | ---        | ---            |  |
| W       | ng/g  | ---              | 880 ± 90 (6)               | 790    | 780 - 1000   | ---             | 880 ± 90 (6)     | ---             | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Y       | ug/g  | ---              | 9.2 ± 0.8 (3)              | 9.5    | 8.3 - 9.7    | ---             | ---              | 9.0 (2)         | 9.5 (1)        | 9.5 (1)        | ---            | ---           | ---        | ---            |  |
| Yb      | ug/g  | ---              | 1.08 ± 0.09 (11)           | 1.1    | 0.9 - 1.2    | ---             | 1.10 ± 0.08 (10) | 0.9 (1)         | ---            | ---            | ---            | ---           | ---        | ---            |  |
| Zn      | ug/g  | 28 ± 2           | 27.2 ± 1.4 (19)            | 27.6   | 24.3 - 30    | 26.8 ± 1.5 (9)  | 28.2 ± 2.3 (5)   | 27.7 ± 0.5 (3)  | 27.3 ± 1.2 (3) | 27.3 ± 1.2 (3) | ---            | ---           | ---        | ---            |  |
| Zr      | ug/g  | ---              | 53 ± 5 (3)                 | 55     | 47 - 57      | ---             | 47 (1)           | ---             | 55 (1)         | 55 (1)         | ---            | ---           | ---        | ---            |  |

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (revised 3/1/86)

| Conc             | Uncer  | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|--------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |        |     |        |           | <u>As (ug/g) cont.</u> |       |     |        |           |
| <                | 1500   |     | ITNA   | 86GLA 01  | 9.21                   | 0.15  |     | ITNA   | 86GLA 01  |
| <                | 3000   | L   | WXRF   | 82MIL 01  | 9.27                   |       |     | AF     | 82WIL 01  |
| 300              |        |     | ITNA   | 79CAH 01  | 9.34                   |       |     | FAA    | 82WIL 01  |
| <u>AL (%)</u>    |        |     |        |           | 9.4                    | 1.3   |     | ITNA   | 83OBR 01  |
| 2.74             |        | 34  | AA     | 83BET 01  | 9.4                    | 1.3   |     | ITNA   | 79CAH 01  |
| 2.8              | 0.27   |     | CPXRF  | 80KIR 01  | 9.5                    |       | 11  | HAA    | 82CRO 03  |
| 2.81             | 0.02   | 34  | AA     | 83BET 01  | 9.54                   | 0.64  |     | HAA    | 82NAD 01  |
| 2.82             | 0.13   |     | ITNA   | 83JER 01  | 9.6                    |       | 11  | FAA    | 82EBD 02  |
| 2.86             | 0.03   |     | ICPES  | 85HAR 01  | 9.7                    | 0.3   |     | ITNA   | 85GAU 04  |
| 2.9              | 0.05   |     | TCGS   | 79AND 01  | 9.8                    |       | 11  | FAA    | 82EBD 02  |
| 2.9              | 0.12   |     | ITNA   | 82JER 01  | 9.8                    |       | 11  | HAA    | 82CRO 03  |
| 2.9              | 0.3    |     | ITNA   | 80GER 01  | 9.9                    | 0.5   |     | PAA    | 80GER 01  |
| 2.91             | 0.05   |     | ITNA   | 86GLA 01  | 10.2                   | 0.4   |     | ITNA   | 81JIN 01  |
| 2.93             | 0.03   |     | AA     | 82NAD 02  | 11                     | 2     |     | ITNA   | 80GER 01  |
| 2.95             | 0.04   |     | XRF    | 79CAH 01  | 11.1                   | 1.3   |     | ITNA   | 85SUN 01  |
| 2.96             | 0.14   |     | ITNA   | 85SUN 01  | <u>ASH (%)</u>         |       |     |        |           |
| 2.97             | 0.04   |     | IENA   | 85GLA 02  | 21.7                   |       |     | UU     | 85SHI 01  |
| 2.99             | 0.06   |     | ITNA   | 83OBR 01  | 21.7                   |       |     | UU     | 82EBD 02  |
| 2.99             | 0.14   |     | ITNA   | 84GLA 02  | 21.8                   |       | 34  | CB     | 82MIL 01  |
| 3                | 0.01   |     | ICPES  | 84NAD 01  | 22                     |       | 11  | AA     | 84NAK 01  |
| 3                | 0.05   |     | ICPES  | 82NAD 02  | 22                     |       |     | CB     | 82KAM 01  |
| 3                | 0.1    |     | AA     | 83RAP 01  | <u>Au (ng/g)</u>       |       |     |        |           |
| 3.01             | 0.13   |     | TCGS   | 79FAI 01  | <                      | 8     |     | ITNA   | 86GLA 01  |
| 3.01             | 0.13   | D   | TCGS   | 80GER 01  | <                      | 50    | L   | ITNA   | 79CAH 01  |
| 3.01             | 0.13   | D   | TCGS   | 80AND 01  | 3                      | 1     |     | ITNA   | 80KOS 01  |
| 3.0576           | 0.0106 |     | ICPES  | 85PEA 01  | <u>B (ug/g)</u>        |       |     |        |           |
| 3.06             | 0.08   |     | ITNA   | 85AKA 01  | 22                     | 3     |     | ICPES  | 81NAD 01  |
| 3.07             | 0.13   |     | ITNA   | 80GAR 01  | 50.9                   | 0.5   |     | TCGS   | 79AND 01  |
| 3.1              |        |     | ITNA   | 84CLE 01  | 52                     | 19    |     | ITNA   | 82SCH 05  |
| 3.1              | 0.06   |     | AA     | 82KAM 01  | 52.7                   | 1.8   |     | TCGS   | 79FAI 01  |
| 3.33             |        |     | CPIA   | 83BIR 01  | 53                     | 2     |     | TCGS   | 80AND 01  |
| 9.47             |        |     | EXRF   | 82EBD 02  | 53                     | 2     | D   | TCGS   | 80GER 01  |
| <u>As (ug/g)</u> |        |     |        |           | 54                     |       |     | TCGS   | 85GAU 04  |
| 6.4              | 2.1    |     | CPXRF  | 80KIR 01  | 55                     |       |     | OES    | 83MIL 01  |
| 7.6              |        | 11  | FAA    | 82EBD 02  | 55                     | 4     | 35  | TCGS   | 81GLA 04  |
| 8.3              | 1      |     | ITNA   | 83JER 01  | <u>Ba (ug/g)</u>       |       |     |        |           |
| 8.4              |        | 11  | FAA    | 82EBD 02  | 97                     | 7     |     | ITNA   | 84TU 01   |
| 8.7              | 0.2    |     | ITNA   | 82JER 01  | 100                    | 13    |     | ITNA   | 81JIN 01  |
| 8.7              | 0.3    |     | HAA    | 85LIN 02  | 102                    | 1     |     | ICPES  | 84NAD 01  |
| 8.88             | 1.22   |     | ICPES  | 81NAD 01  | 102                    | 6     |     | ITNA   | 84SUZ 02  |
| 9                |        | 11  | FAA    | 82EBD 02  | 112                    | 3     |     | ICPES  | 85HAR 01  |
| 9                | 0.4    |     | ITNA   | 80KOS 01  | 116                    | 7     | 5   | ITNA   | 80TOU 01  |
| 9                | 0.4    |     | ITNA   | 81KUL 01  | 119                    | 27    |     | ITNA   | 85SUN 01  |
| 9                | 0.9    |     | ITNA   | 84CHA 02  |                        |       |     |        |           |
| 9.2              |        | 34  | WXRF   | 82MIL 01  |                        |       |     |        |           |
| 9.2              | 0.5    |     | AA     | 83RAP 01  |                        |       |     |        |           |
| 9.2              | 1.2    |     | ITNA   | 84TU 01   |                        |       |     |        |           |

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc               | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|--------------------|-------|-----|--------|-----------|
| <u>Ba (ug/g) cont.</u> |       |     |        |           | <u>C-Fixed (%)</u> |       |     |        |           |
| 120                    | 10    |     | ICPES  | 82NAD 02  | 43                 |       | 11  | AA     | 84NAK 01  |
| 122                    | 11    |     | ITNA   | 80GER 01  |                    |       |     |        |           |
| 125                    |       | 34  | WXRF   | 82MIL 01  | <u>Ca (ug/g)</u>   |       |     |        |           |
| 126                    | 11    |     | ITNA   | 82JER 01  | 2100               | 100   |     | PAA    | 80GER 01  |
| 132                    | 7     |     | ITNA   | 85AKA 01  | 2160               | 130   |     | ITNA   | 82JER 01  |
| 136                    | 16    |     | ITNA   | 85GAU 04  | 2200               | 300   |     | ITNA   | 84GLA 02  |
| 138                    | 20    |     | ITNA   | 79CAH 01  | 2240               | 30    |     | ICPES  | 85HAR 01  |
| 150                    | 26    |     | ITNA   | 80GAR 01  | 2300               | 30    |     | AA     | 82NAD 02  |
| 170                    | 15    |     | ITNA   | 84CHA 02  | 2300               | 100   |     | XRF    | 79CAH 01  |
|                        |       |     |        |           | 2300               | 200   |     | AA     | 82KAM 01  |
|                        |       |     |        |           | 2340               | 270   |     | ITNA   | 85SUN 01  |
|                        |       |     |        |           | 2400               | 30    |     | ICPES  | 82NAD 02  |
|                        |       |     |        |           | 2400               | 100   | 34  | AA     | 83BET 01  |
|                        |       |     |        |           | 2400               | 200   | D   | TCGS   | 80AND 01  |
|                        |       |     |        |           | 2400               | 200   | D   | TCGS   | 79AND 01  |
|                        |       |     |        |           | 2400               | 200   | D   | TCGS   | 80GER 01  |
|                        |       |     |        |           | 2400               | 200   |     | ITNA   | 80GER 01  |
|                        |       |     |        |           | 2400               | 200   |     | TCGS   | 79FAI 01  |
|                        |       |     |        |           | 2450               | 140   |     | ITNA   | 83OBR 01  |
|                        |       |     |        |           | 2600               |       | 34  | AA     | 83BET 01  |
|                        |       |     |        |           | 2600               |       |     | ITNA   | 84CLE 01  |
|                        |       |     |        |           | 2600               | 100   |     | ICPES  | 84NAD 01  |
|                        |       |     |        |           | 2600               | 200   |     | ITNA   | 85AKA 01  |
|                        |       |     |        |           | 2652.65            |       |     | ICPES  | 85PEA 01  |
|                        |       |     |        |           | 2700               | 175   |     | ITNA   | 80GAR 01  |
|                        |       |     |        |           | 46500              |       |     | EXRF   | 82EBD 02  |
|                        |       |     |        |           | <u>Cd (ng/g)</u>   |       |     |        |           |
|                        |       |     |        |           | 150                | 30    |     | TCGS   | 79AND 01  |
|                        |       |     |        |           | 160                |       | 34  | FAA    | 83BET 01  |
|                        |       |     |        |           | 170                | 60    | 34  | FAA    | 83BET 01  |
|                        |       |     |        |           | 180                | 40    |     | AA     | 83RAP 01  |
|                        |       |     |        |           | 200                | 50    |     | ITNA   | 80KOS 01  |
|                        |       |     |        |           | 210                | 30    |     | TCGS   | 79FAI 01  |
|                        |       |     |        |           | 210                | 30    | D   | TCGS   | 80GER 01  |
|                        |       |     |        |           | 210                | 30    | D   | TCGS   | 80AND 01  |
|                        |       |     |        |           | <u>Ce (ug/g)</u>   |       |     |        |           |
|                        |       |     |        |           | 25.7               | 7.2   |     | CPXRF  | 80KIR 01  |
|                        |       |     |        |           | 26                 | 1.7   |     | ITNA   | 79CAH 01  |
|                        |       |     |        |           | 26                 | 3     |     | ITNA   | 85AKA 01  |
|                        |       |     |        |           | 27                 | 4     |     | ITNA   | 81KUL 01  |
|                        |       |     |        |           | 27                 | 4     |     | ITNA   | 80KOS 01  |
|                        |       |     |        |           | 28                 | 2     |     | ITNA   | 84SUZ 02  |
|                        |       |     |        |           | 28.5               | 0.3   |     | ITNA   | 81JIN 01  |
|                        |       |     |        |           | 28.5               | 0.4   |     | ICPES  | 82CRO 01  |
|                        |       |     |        |           | 29.7               | 0.9   |     | ICPES  | 83MAH 05  |
|                        |       |     |        |           | 30                 |       |     | ITNA   | 85GRE 02  |
|                        |       |     |        |           | <u>C (%)</u>       |       |     |        |           |
| 61.3                   |       | 14  | CB     | 85NAD 01  |                    |       |     |        |           |
| 62.08                  | 0.1   | 14  | CB     | 85NAD 01  |                    |       |     |        |           |
| 62.7                   | 0.06  |     | CB     | 80SCH 02  |                    |       |     |        |           |
| 65                     | 4     |     | TCGS   | 79AND 01  |                    |       |     |        |           |
| 71                     | 4     | D   | TCGS   | 80AND 01  |                    |       |     |        |           |
| 71                     | 4     |     | TCGS   | 79FAI 01  |                    |       |     |        |           |
| 71                     | 4     | D   | TCGS   | 80GER 01  |                    |       |     |        |           |

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ce (ug/g) cont.</u> |       |     |        |           | <u>Co (ug/g) cont.</u> |       |     |        |           |
| 30.2                   | 1.2   |     | ITNA   | 85SUN 01  | 7.3                    | 1.3   | 11  | AA     | 84NAK 01  |
| 30.8                   | 0.5   |     | ITNA   | 84TU 01   | 7.5                    |       |     | ITNA   | 84CLE 01  |
| 31.1                   | 3.4   |     | ITNA   | 80GAR 01  | 7.5                    | 0.4   |     | ITNA   | 79CAH 01  |
| 31.8                   | 1.5   |     | ITNA   | 85GAU 04  | 8.5                    | 1     |     | ITNA   | 83JER 01  |
| 32                     |       | 34  | WXRF   | 82MIL 01  | <u>Cr (ug/g)</u>       |       |     |        |           |
| 32                     | 4     |     | ITNA   | 80GER 01  | 3.4                    | 0.2   |     | AA     | 83RAP 01  |
| <u>Cl (ug/g)</u>       |       |     |        |           | 12.8                   | 2     |     | ICPES  | 84NAD 01  |
| 700                    | 10    |     | IC     | 85GEN 01  | 26                     | 2     | 11  | AA     | 84NAK 01  |
| 700                    | 100   |     | XRF    | 79CAH 01  | 26                     | 3     |     | ITNA   | 81KUL 01  |
| 704                    | 42    |     | ITNA   | 85SUN 01  | 26                     | 6     |     | ITNA   | 80KOS 01  |
| 743                    | 46    |     | IC     | 83NAD 01  | 30                     | 2     |     | ICPES  | 85HAR 01  |
| 750                    | 15    |     | ITNA   | 86GLA 01  | 30.9                   | 0.6   |     | ITNA   | 84TU 01   |
| 750                    | 60    |     | ITNA   | 84GLA 02  | 31                     |       |     | DCPES  | 85MCC 02  |
| 760                    |       | 34  | WXRF   | 82MIL 01  | 31.2                   | 3.7   |     | ITNA   | 84CHA 02  |
| 766                    | 30    |     | TCGS   | 79AND 01  | 31.8                   | 3.7   | 11  | AA     | 82LIN 03  |
| 770                    |       |     | ISE    | 83NAD 01  | 32                     | 1.9   |     | AA     | 82KAM 01  |
| 770                    | 24    |     | ITNA   | 82JER 01  | 33                     | 3     |     | ITNA   | 85AKA 01  |
| 770                    | 48    |     | ISE    | 81NAD 01  | 33.3                   |       |     | ICPES  | 81MER 03  |
| 776                    | 20    |     | ITNA   | 83JER 01  | 33.3                   | 1.6   |     | ITNA   | 81JIN 01  |
| 776                    | 36    |     | ITNA   | 83OBR 01  | 33.4                   | 1.5   |     | ITNA   | 85SUN 01  |
| 784                    | 17    |     | TCGS   | 79FAI 01  | 33.8                   |       | 34  | FAA    | 83BET 01  |
| 784                    | 17    | D   | TCGS   | 80GER 01  | 33.8                   | 2     |     | ITNA   | 83JER 01  |
| 784                    | 17    | D   | TCGS   | 80AND 01  | 34                     | 2     |     | ITNA   | 80GER 01  |
| 800                    | 70    |     | ITNA   | 80GER 01  | 34                     | 3.6   |     | ITNA   | 82JER 01  |
| 897                    | 23    |     | ITNA   | 80GAR 01  | 34                     | 4     |     | XRF    | 85HAR 01  |
| <u>Co (ug/g)</u>       |       |     |        |           | 34.4                   | 2.4   |     | ITNA   | 84SUZ 02  |
| 4.4                    | 0.3   |     | ICPES  | 85HAR 01  | 34.7                   | 2     |     | ITNA   | 86GLA 01  |
| 5.86                   | 0.21  |     | ITNA   | 81JIN 01  | 34.8                   | 6     | 34  | FAA    | 83BET 01  |
| 6                      |       | 34  | WXRF   | 82MIL 01  | 35                     |       |     | ITNA   | 84CLE 01  |
| 6.1                    | 0.1   |     | ITNA   | 84TU 01   | 35.6                   | 1     |     | ITNA   | 85GAU 04  |
| 6.1                    | 0.4   |     | ITNA   | 84SUZ 02  | 36                     | 2     |     | ITNA   | 79CAH 01  |
| 6.3                    | 1.3   | 34  | FAA    | 83BET 01  | 36                     | 3.5   |     | CPXRF  | 80KIR 01  |
| 6.4                    | 0.6   |     | AA     | 83RAP 01  | 36                     | 6     |     | ITNA   | 80GAR 01  |
| 6.5                    |       |     | ICPES  | 81MER 03  | 36.9                   | 1     | 11  | AA     | 84NAK 01  |
| 6.5                    | 0.2   |     | ITNA   | 80GER 01  | 36.9                   | 3.3   | 11  | AA     | 82LIN 03  |
| 6.5                    | 0.5   |     | ITNA   | 81KUL 01  | 39                     | 8.8   |     | AE+AF  | 82GOL 01  |
| 6.56                   | 0.22  |     | ITNA   | 85GAU 04  | 40                     |       | 34  | WXRF   | 82MIL 01  |
| 6.6                    | 0.3   |     | ITNA   | 86GLA 01  | <u>Cs (ug/g)</u>       |       |     |        |           |
| 6.6                    | 0.5   | 5   | ITNA   | 80TOU 01  | 1.9                    | 0.6   |     | ITNA   | 79CAH 01  |
| 6.6                    | 1.1   |     | ITNA   | 80GAR 01  | 2                      | 0.3   |     | ITNA   | 80GER 01  |
| 6.7                    | 0.1   |     | ICPES  | 83MAH 05  | 2                      | 0.32  |     | ITNA   | 84CHA 02  |
| 6.7                    | 0.9   | 11  | AA     | 84NAK 01  | 2.12                   | 0.13  |     | ITNA   | 84GIB 01  |
| 6.71                   | 0.11  |     | ITNA   | 85SUN 01  | 2.2                    | 0.1   |     | ITNA   | 85AKA 01  |
| 6.8                    | 0.3   |     | ITNA   | 80KOS 01  | 2.27                   | 0.15  |     | ITNA   | 85GAU 04  |
| 7                      | 0.4   |     | ITNA   | 85AKA 01  | 2.3                    | 0.11  |     | ITNA   | 81JIN 01  |
| 7.1                    | 0.5   |     | ITNA   | 84CHA 02  | 2.33                   | 0.07  |     | ITNA   | 85SUN 01  |
| 7.3                    |       | 34  | FAA    | 83BET 01  | 2.4                    | 0.2   |     | ITNA   | 81KUL 01  |



TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

| Conc                | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|---------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Fe (%) cont.</u> |       |     |        |           | <u>Hf (ug/g)</u> |       |     |        |           |
| 1.12                | 0.09  |     | ITNA   | 80GAR 01  | 1.43             | 0.05  |     | ITNA   | 84TU 01   |
| 1.125               |       |     | ICPES  | 81MER 03  | 1.44             | 0.09  |     | ITNA   | 81JIN 01  |
| 1.13                | 0.02  |     | ITNA   | 85SUN 01  | 1.46             | 0.07  |     | ITNA   | 85SUN 01  |
| 1.14                | 0.01  |     | AA     | 79CAH 01  | 1.55             | 0.08  |     | ITNA   | 80GER 01  |
| 1.14                | 0.04  |     | ITNA   | 85GAU 04  | 1.55             | 0.11  |     | ITNA   | 84SUZ 02  |
| 1.14                | 0.05  |     | ITNA   | 86GLA 01  | 1.65             | 0.15  |     | ITNA   | 85GAU 04  |
| 1.16                | 0.03  |     | ITNA   | 80GER 01  | 1.68             | 0.06  |     | ITNA   | 86GLA 01  |
| 1.16                | 0.37  |     | ITNA   | 79CAH 01  | 1.7              | 0.1   |     | ITNA   | 79CAH 01  |
| 1.17                | 0.04  |     | AA     | 83RAP 01  | 1.7              | 0.2   |     | ITNA   | 85AKA 01  |
| 1.17                | 0.04  |     | TCGS   | 79AND 01  | 1.8              | 0.3   |     | ITNA   | 80GAR 01  |
| 1.2                 | 0.02  |     | AA     | 82KAM 01  | 1.9              | 0.3   | 5   | ITNA   | 80TOU 01  |
| 6.78                |       |     | EXRF   | 82EBD 02  | <u>Hg (ng/g)</u> |       |     |        |           |
| <u>Ga (ug/g)</u>    |       |     |        |           | 90               | 15    |     | ITNA   | 84CHA 02  |
| 7.2                 | 2.5   |     | CPXRF  | 80KIR 01  | 118              | 14    |     | CVAA   | 80NAD 01  |
| 7.84                | 0.6   |     | ITNA   | 83OBR 01  | 120              | 50    |     | ITNA   | 80KOS 01  |
| 8                   | 0.8   |     | ITNA   | 80GER 01  | 122              | 6     |     | CVAA   | 85DUM 02  |
| 8.2                 |       |     | FAA    | 85XIA 01  | 129              | 10    |     | RTNA   | 84DRA 01  |
| 8.4                 |       | 34  | WXRF   | 82MIL 01  | 129              | 20    |     | RTNA   | 84DEL 01  |
| 8.5                 | 0.8   |     | ITNA   | 79CAH 01  | 134.1            |       |     | AF     | 82WIL 01  |
| <u>Gd (ug/g)</u>    |       |     |        |           | 134.1            | 3.1   |     | CVAA   | 82EBD 01  |
| 1.9                 | 0.2   |     | TCGS   | 79AND 01  | 135              | 18    |     | CVAA   | 82DOO 01  |
| 1.95                | 0.03  | D   | TCGS   | 80GER 01  | 169              | 65    |     | ITNA   | 84SUZ 02  |
| 1.95                | 0.03  |     | TCGS   | 79FAI 01  | 170              | 20    |     | CVAA   | 81NAD 01  |
| 2.4                 | 0.2   |     | ICPES  | 82CRO 01  | 210              | 90    |     | ITNA   | 81KUL 01  |
| 3                   |       | 34  | WXRF   | 82MIL 01  | <u>Ho (ng/g)</u> |       |     |        |           |
| 3                   | 0.05  |     | TCGS   | 80AND 01  | <                | 2000  | L   | WXRF   | 82MIL 01  |
| 3.4                 | 0.3   |     | ITNA   | 84SUZ 02  | 340              | 110   |     | ITNA   | 84SUZ 02  |
| <u>Ge (ug/g)</u>    |       |     |        |           | 380              | 50    |     | ICPES  | 82CRO 01  |
| 2.5                 |       | 34  | WXRF   | 82MIL 01  | <u>I (ug/g)</u>  |       |     |        |           |
| <u>H (%)</u>        |       |     |        |           | 0.9              |       | 34  | WXRF   | 82MIL 01  |
| 3.68                | 0.07  |     | TCGS   | 79AND 01  | 1.63             |       |     | ITNA   | 85SUN 01  |
| 3.7                 | 0.1   |     | TCGS   | 79FAI 01  | 1.77             |       |     | IENA   | 84GLA 02  |
| 3.7                 | 0.1   | D   | TCGS   | 80AND 01  | 1.8              | 0.2   |     | ITNA   | 80GER 01  |
| 3.7                 | 0.1   | D   | TCGS   | 80GER 01  | 2                | 0.3   |     | ITNA   | 84SUZ 02  |
| 4.17                |       | 14  | CB     | 85NAD 01  | <u>In (ng/g)</u> |       |     |        |           |
| 4.17                | 0.01  |     | CB     | 80SCH 02  | 36               | 3     |     | ITNA   | 83OBR 01  |
| 4.59                | 0.07  | 14  | CB     | 85NAD 01  | 36               | 4     |     | ITNA   | 80GER 01  |
| <u>H2O- (%)</u>     |       |     |        |           | 40               | 10    |     | ITNA   | 79CAH 01  |
| 1.6                 |       |     | GRAV   | 85LIN 02  | 40.5             | 5     |     | ITNA   | 84CHA 02  |
| 1.62                |       |     | FD     | 80KHA 02  |                  |       |     |        |           |
| 2.6                 | 0.1   |     | GRAV   | 85HAN 01  |                  |       |     |        |           |
| 2.6                 | 0.1   | 2   | MPOES  | 85HAN 01  |                  |       |     |        |           |
| 2.6                 | 0.1   | 2   | MPOES  | 85HAN 01  |                  |       |     |        |           |

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

| Conc                | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|---------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>K (ug/g)</u>     |       |     |        |           | <u>Li (ug/g)</u> |       |     |        |           |
| 3400                | 100   |     | ITNA   | 83JER 01  | 35               |       |     | OES    | 83MIL 01  |
| 3700                |       |     | XRF    | 79CAH 01  | 36.2             | 0.1   |     | AA     | 79CAH 01  |
| 3800                | 50    |     | ITNA   | 83OBR 01  | 37               | 1     |     | ICPES  | 84NAD 01  |
| 3900                | 100   |     | ICPES  | 84NAD 01  | 47               |       |     | CPAA   | 83BIR 01  |
| 4000                | 200   |     | ITNA   | 81JIN 01  | <u>Lu (ng/g)</u> |       |     |        |           |
| 4000                | 900   |     | ITNA   | 84CHA 02  | 134              | 13    |     | ITNA   | 80KOS 01  |
| 4100                | 80    |     | AA     | 82KAM 01  | 150              | 10    |     | ICPES  | 82CRO 01  |
| 4100                | 100   |     | TCGS   | 79AND 01  | 163              | 10    |     | ITNA   | 84CHA 02  |
| 4100                | 200   |     | ICPES  | 82NAD 02  | 170              | 20    |     | ITNA   | 85SUN 01  |
| 4100                | 500   |     | ITNA   | 86GLA 01  | 170              | 30    |     | ITNA   | 85AKA 01  |
| 4120                | 50    |     | ITNA   | 85SUN 01  | 173              | 12    |     | ITNA   | 86GLA 01  |
| 4200                |       | 34  | AA     | 83BET 01  | 174              | 24    |     | ITNA   | 84SUZ 02  |
| 4200                | 150   |     | AA     | 82NAD 02  | 177              | 10    |     | ITNA   | 85GAU 04  |
| 4200                | 200   | D   | TCGS   | 80GER 01  | 180              |       |     | ITNA   | 85GRE 02  |
| 4200                | 200   |     | TCGS   | 79FAI 01  | 180              | 30    |     | ITNA   | 80GER 01  |
| 4200                | 200   | D   | TCGS   | 80AND 01  | 180              | 70    |     | ITNA   | 80GAR 01  |
| 4200                | 200   |     | ITNA   | 79CAH 01  | 190              | 20    |     | ITNA   | 81JIN 01  |
| 4200                | 200   |     | ITNA   | 80GER 01  | 220              | 40    |     | ITNA   | 79CAH 01  |
| 4200                | 400   | 34  | AA     | 83BET 01  | <u>Mg (ug/g)</u> |       |     |        |           |
| 4300                | 645   |     | ITNA   | 80GAR 01  | 600              | 300   |     | XRF    | 79CAH 01  |
| 4400                | 300   |     | ITNA   | 85AKA 01  | 870              | 10    |     | ICPES  | 84NAD 01  |
| 4523.5              | 166   |     | ICPES  | 85PEA 01  | 910              |       |     | DCPES  | 85MCC 02  |
| 4700                | 300   |     | ICPES  | 85HAR 01  | 980              | 40    |     | ICPES  | 85HAR 01  |
| 14900               |       |     | EXRF   | 82EBD 02  | 990              | 30    |     | AA     | 82KAM 01  |
| <u>K-40 (pCi/g)</u> |       |     |        |           | 990              | 40    |     | AA     | 82NAD 02  |
| 2.7                 | 0.2   |     | GAMMA  | 84ROS 03  | 1020             | 10    |     | ICPES  | 82NAD 02  |
| <u>La (ug/g)</u>    |       |     |        |           | 1052             |       |     | ICPES  | 85PEA 01  |
| 8.88                | 0.74  |     | ITNA   | 84CHA 02  | 1100             | 100   | 34  | AA     | 83BET 01  |
| 10.9                | 0.5   |     | ITNA   | 80KOS 01  | 1300             |       | 34  | AA     | 83BET 01  |
| 11.4                | 0.6   |     | ITNA   | 84SUZ 02  | 1300             | 300   |     | ITNA   | 80GER 01  |
| 12.8                | 0.5   |     | ITNA   | 83OBR 01  | 1400             | 100   |     | JENA   | 85GLA 02  |
| 13.03               | 0.3   |     | ITNA   | 81JIN 01  | 1400             | 220   |     | ITNA   | 80GAR 01  |
| 14.2                | 0.1   |     | ITNA   | 86GLA 01  | 1600             | 700   |     | ITNA   | 85AKA 01  |
| 14.5                | 0.2   |     | ICPES  | 82CRO 01  | 1714             |       |     | CPAA   | 83BIR 01  |
| 15                  |       |     | ITNA   | 85GRE 02  | 19900            |       |     | EXRF   | 82EBD 02  |
| 15                  | 2.6   |     | ITNA   | 80GAR 01  | <u>Mn (ug/g)</u> |       |     |        |           |
| 15.1                | 1.2   |     | ITNA   | 79CAH 01  | 20               | 4.3   |     | CPXRF  | 80KIR 01  |
| 15.2                | 0.8   |     | ICPES  | 83MAH 05  | 23               |       |     | ITNA   | 84CLE 01  |
| 15.4                | 0.6   |     | ITNA   | 85SUN 01  | 26               | 2     | 34  | FAA    | 83BET 01  |
| 15.6                | 0.4   |     | ICPES  | 85HAR 01  | 26               | 6     |     | AE+AF  | 82GOL 01  |
| 15.9                | 0.6   |     | ITNA   | 85GAU 04  | 27               | 2     |     | ITNA   | 83JER 01  |
| 17                  | 1     |     | ITNA   | 85AKA 01  | 27.1             | 0.4   |     | ICPES  | 83MAH 05  |
| 18                  | 2     |     | ITNA   | 80GER 01  | 27.3             | 1.4   |     | ITNA   | 82JER 01  |
| 19                  |       | 34  | WXRF   | 82MIL 01  | 27.4             | 2.5   |     | ITNA   | 84CHA 02  |
| 19                  | 2     |     | ITNA   | 83JER 01  | 28               |       |     | ESR    | 85SHI 01  |
| 21                  | 1     |     | ITNA   | 82JER 01  |                  |       |     |        |           |

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer  | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|--------|-----|--------|-----------|
| <u>S (%)</u>     |       |     |        |           | <u>Sc (ug/g) cont.</u> |        |     |        |           |
| 0.09             |       |     | ICPES  | 85PEA 01  | 6.2                    |        | 34  | WXRF   | 82MIL 01  |
| 1.19             | 0.01  |     | XRF    | 79CAH 01  | 6.2                    | 0.2    |     | ITNA   | 79CAH 01  |
| 1.37             | 0.01  |     | IC     | 83NAD 01  | 6.2                    | 0.3    |     | ITNA   | 86GLA 01  |
| 1.48             |       |     | XRF    | 83NAD 01  | 6.3                    | 0.1    |     | ITNA   | 80KOS 01  |
| 1.48             | 0.003 |     | IC     | 85GEN 01  | 6.3                    | 0.2    | 5   | ITNA   | 80TOU 01  |
| 1.48             | 0.07  |     | XRF    | 81NAD 01  | 6.4                    | 0.2    |     | ITNA   | 83JER 01  |
| 1.5              | 0.7   |     | ITNA   | 82JER 01  | 6.42                   | 0.25   |     | ITNA   | 84CHA 02  |
| 1.5              | 0.7   |     | NAA    | 81HO 02   | 6.56                   | 0.23   |     | ITNA   | 80GAR 01  |
| 1.57             | 0.01  |     | CB     | 86GAU 01  | 6.7                    | 0.05   |     | ITNA   | 81JIN 01  |
| 1.58             | 0.02  |     | CB     | 85GLA 03  | 6.8                    | 0.6    |     | ITNA   | 80GER 01  |
| 1.59             | 0.02  | D   | TCGS   | 80AND 01  | 6.9                    | 0.9    | 5   | ITNA   | 80TOU 01  |
| 1.59             | 0.02  | D   | TCGS   | 80GER 01  |                        |        |     |        |           |
| 1.59             | 0.02  |     | TCGS   | 79FAI 01  |                        |        |     |        |           |
| 1.59             | 0.03  |     | CPAA   | 84LAN 02  |                        |        |     |        |           |
| 1.59             | 0.09  |     | TCGS   | 79AND 01  | 1.9                    | 0.5    |     | ITNA   | 86GLA 01  |
| 1.6              | 0.02  |     | XRF    | 84WEB 01  | 2.4                    |        | 34  | WXRF   | 82MIL 01  |
| 1.6              | 0.07  |     | CPXRF  | 80KIR 01  | 2.4                    | 0.2    |     | AA     | 83RAP 01  |
| 1.62             |       |     | UU     | 82EBD 02  | 2.4                    | 0.3    |     | RTNA   | 80KNA 01  |
|                  |       |     |        |           | 2.54                   | 0.45   |     | ITNA   | 84CHA 02  |
|                  |       |     |        |           | 2.55                   | 0.29   |     | FAAC   | 85WOO 01  |
|                  |       |     |        |           | 2.57                   | 0.05   |     | IENA   | 80KOS 01  |
|                  |       |     |        |           | 2.58                   |        |     | FAA    | 82WIL 01  |
|                  |       |     |        |           | 2.59                   |        |     | AF     | 82WIL 01  |
|                  |       |     |        |           | 2.6                    | 0.3    |     | ITNA   | 80GER 01  |
|                  |       |     |        |           | 2.65                   | 0.02   | 7   | HAA    | 84IMA 01  |
|                  |       |     |        |           | 2.65                   | 0.1    | D   | HAA    | 84IMA 03  |
|                  |       |     |        |           | 2.69                   | 0.4    |     | RTNA   | 84DEL 01  |
|                  |       |     |        |           | 2.7                    | 0.3    |     | HAA    | 85LIN 01  |
|                  |       | 11  | HAA    | 82CRO 03  | 2.7                    | 0.3    |     | HAA    | 85LIN 02  |
|                  |       |     | ITNA   | 84CLE 01  | 2.7                    | 0.4    |     | ITNA   | 84SUZ 02  |
|                  |       | 11  | HAA    | 82CRO 03  | 2.9                    | 0.2    |     | ITNA   | 85AKA 01  |
|                  | 90    |     | ITNA   | 80GER 01  | 3                      | 0.1    |     | ITNA   | 79CAH 01  |
|                  | 20    |     | ITNA   | 83JER 01  | 3                      | 0.4    |     | ITNA   | 84TU 01   |
|                  | 50    |     | ITNA   | 84TU 01   | 3.1                    |        |     | ITNA   | 84CLE 01  |
|                  | 80    |     | ITNA   | 81JIN 01  | 3.12                   | 0.17   |     | HAA    | 82NAD 01  |
|                  | 60    |     | ITNA   | 84CHA 02  | 3.62                   | 0.52   |     | ITNA   | 85SUN 01  |
|                  | 150   |     | ITNA   | 85SUN 01  |                        |        |     |        |           |
|                  | 90    |     | ITNA   | 85GAU 04  |                        |        |     |        |           |
|                  | 50    | 5   | ITNA   | 80TOU 01  |                        |        |     |        |           |
|                  | 50    |     | ITNA   | 79CAH 01  | 3.1                    | 0.14   |     | CPXRF  | 80KIR 01  |
| 1000             |       | 34  | WXRF   | 82MIL 01  | 5.5                    | 0.4    | 34  | AA     | 83BET 01  |
|                  |       |     |        |           | 5.68                   | 0.01   |     | ICPES  | 84NAD 01  |
|                  |       |     |        |           | 5.7                    |        | 34  | AA     | 83BET 01  |
|                  |       |     |        |           | 5.8                    | 0.1    | D   | TCGS   | 80AND 01  |
|                  |       |     |        |           | 5.8                    | 0.1    | D   | TCGS   | 79FAI 01  |
|                  |       |     |        |           | 5.8                    | 0.1    | D   | TCGS   | 80GER 01  |
|                  |       |     |        |           | 5.9122                 | 0.0187 |     | ICPES  | 85PEA 01  |
|                  |       |     |        |           | 5.92                   | 0.01   |     | XRF    | 79CAH 01  |
|                  |       |     |        |           | 6.05                   | 0.2    |     | TCGS   | 79AND 01  |
|                  |       |     |        |           | 6.09                   | 0.07   |     | ICPES  | 82NAD 02  |
|                  |       |     |        |           | 6.21                   | 0.08   |     | AA     | 82NAD 02  |
|                  |       |     |        |           | 27.79                  |        |     | EXRF   | 82EBD 02  |
|                  |       |     |        |           |                        |        |     |        |           |
| <u>Sc (ug/g)</u> |       |     |        |           | <u>Si (%)</u>          |        |     |        |           |
| 5.3              | 1.2   |     | CPXRF  | 80KIR 01  | 3.1                    | 0.14   |     | CPXRF  | 80KIR 01  |
| 5.7              | 0.2   |     | ICPES  | 85HAR 01  | 5.5                    | 0.4    | 34  | AA     | 83BET 01  |
| 5.9              | 0.2   |     | ITNA   | 82JER 01  | 5.68                   | 0.01   |     | ICPES  | 84NAD 01  |
| 6                | 0.3   |     | ITNA   | 81KUL 01  | 5.7                    |        | 34  | AA     | 83BET 01  |
| 6.06             | 0.11  |     | ITNA   | 85SUN 01  | 5.8                    | 0.1    | D   | TCGS   | 80AND 01  |
| 6.1              | 0.4   |     | ITNA   | 85AKA 01  | 5.8                    | 0.1    | D   | TCGS   | 79FAI 01  |
| 6.14             | 0.2   |     | ITNA   | 85GAU 04  | 5.8                    | 0.1    | D   | TCGS   | 80GER 01  |

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Sm (ug/g)</u> |       |     |        |           | <u>Tb (ng/g)</u>      |       |     |        |           |
| 1.1              | 0.1   |     | ITNA   | 80KOS 01  | 290                   | 30    |     | ITNA   | 81JIN 01  |
| 1.9              | 0.1   | 5   | ITNA   | 80TOU 01  | 290                   | 60    |     | ITNA   | 86GLA 01  |
| 2                |       | 34  | WXRF   | 82MIL 01  | 300                   |       |     | ITNA   | 85GRE 02  |
| 2.1              | 0.05  |     | TCGS   | 79AND 01  | 300                   | 100   |     | ICPES  | 82CRO 01  |
| 2.1              | 0.07  |     | TCGS   | 79FAI 01  | 310                   | 30    |     | ITNA   | 84SUZ 02  |
| 2.1              | 0.07  | D   | TCGS   | 80AND 01  | 320                   | 50    |     | ITNA   | 80GER 01  |
| 2.1              | 0.07  | D   | TCGS   | 80GER 01  | 330                   | 40    |     | ITNA   | 79CAH 01  |
| 2.2              | 0.1   |     | ITNA   | 85AKA 01  | 330                   | 40    |     | ITNA   | 85SUN 01  |
| 2.28             | 0.08  |     | ITNA   | 85GAU 04  | 330                   | 120   |     | ITNA   | 84CHA 02  |
| 2.4              |       |     | ITNA   | 85GRE 02  |                       |       |     |        |           |
| 2.4              | 0.05  |     | ITNA   | 85SUN 01  | <u>Te (ng/g)</u>      |       |     |        |           |
| 2.5              | 0.4   |     | ITNA   | 80GAR 01  |                       |       |     |        |           |
| 2.57             | 0.09  |     | ITNA   | 81JIN 01  | <                     | 600   | L   | WXRF   | 82MIL 01  |
| 2.6              | 0.1   |     | ITNA   | 79CAH 01  | <                     | 830   |     | ITNA   | 84SUZ 02  |
| 2.6              | 0.1   |     | ICPES  | 82CRO 01  | 500                   | 50    |     | HAA    | 82NAD 01  |
| 2.62             | 0.13  |     | ITNA   | 83OBR 01  |                       |       |     |        |           |
| 2.7              | 2     |     | ITNA   | 83JER 01  | <u>Th (ug/g)</u>      |       |     |        |           |
| 2.8              | 0.3   |     | ITNA   | 80GER 01  | 3.1                   | 0.5   |     | CPXRF  | 80KIR 01  |
| 3.1              | 0.3   |     | ITNA   | 84SUZ 02  | 3.77                  | 0.38  |     | ITNA   | 84CHA 02  |
| <u>Sn (ug/g)</u> |       |     |        |           | 4.2                   | 0.2   | 5   | ITNA   | 80TOU 01  |
| 1                |       | 34  | WXRF   | 82MIL 01  | 4.2                   | 0.3   |     | ITNA   | 79CAH 01  |
| 2.3              |       |     | FAA    | 84LON 01  | 4.3                   |       |     | ITNA   | 82JER 01  |
| 8.08             | 1.02  |     | HAA    | 82NAD 01  | 4.3                   | 0.3   |     | ITNA   | 80KOS 01  |
| 84.2             | 2.6   |     | ITNA   | 85SUN 01  | 4.3                   | 0.9   |     | ITNA   | 81KUL 01  |
|                  |       |     |        |           | 4.4                   | 0.1   |     | ICPES  | 83MAH 05  |
|                  |       |     |        |           | 4.4                   | 0.5   |     | ITNA   | 84SUZ 02  |
| <u>Sr (ug/g)</u> |       |     |        |           | 4.48                  | 0.04  |     | ITNA   | 81JIN 01  |
| 60               | 1     |     | ICPES  | 84NAD 01  | 4.5                   | 0.02  |     | IENA   | 85BEL 01  |
| 76.4             | 12.8  |     | ITNA   | 85SUN 01  | 4.5                   | 0.3   |     | ITNA   | 85AKA 01  |
| 79               | 9     |     | ITNA   | 82JER 01  | 4.6                   | 0.2   |     | ITNA   | 86GLA 01  |
| 80               | 11    |     | ITNA   | 84TU 01   | 4.63                  | 0.07  |     | ITNA   | 85SUN 01  |
| 83.6             | 7.8   |     | ITNA   | 83OBR 01  | 4.8                   | 0.2   |     | ITNA   | 80GER 01  |
| 84               | 2     |     | ICPES  | 85HAR 01  | 4.8                   | 0.6   |     | ITNA   | 80GAR 01  |
| 84               | 9     |     | ITNA   | 80GER 01  | 4.81                  | 0.17  |     | ITNA   | 85GAU 04  |
| 90               |       | 34  | WXRF   | 82MIL 01  | 5                     |       | 34  | WXRF   | 82MIL 01  |
| 91               | 18    |     | ITNA   | 79CAH 01  | <u>Th-228 (pCi/g)</u> |       |     |        |           |
| 95.5             | 11.8  |     | ITNA   | 81JIN 01  | 0.499                 | 0.011 | D   | NM     | 81CAS 01  |
|                  |       |     |        |           | 0.499                 | 0.011 |     | NM     | 80CAS 01  |
| <u>Ta (ng/g)</u> |       |     |        |           | <u>Th-230 (pCi/g)</u> |       |     |        |           |
| 290              | 50    |     | ITNA   | 84CHA 02  |                       |       |     |        |           |
| 360              | 10    |     | ITNA   | 84SUZ 02  |                       |       |     |        |           |
| 390              | 50    |     | ITNA   | 85GAU 04  | 0.452                 | 0.017 |     | NM     | 80CAS 01  |
| 390              | 50    |     | ITNA   | 79CAH 01  | 0.452                 | 0.017 | D   | NM     | 81CAS 01  |
| 400              | 30    |     | ITNA   | 80GER 01  | <u>Th-232 (pCi/g)</u> |       |     |        |           |
| 450              | 40    |     | ITNA   | 85SUN 01  |                       |       |     |        |           |
| 450              | 50    |     | ITNA   | 81JIN 01  | 0.40                  | 0.07  |     | GAMMA  | 84ROS 03  |
| 460              | 30    |     | ITNA   | 84TU 01   | 0.484                 | 0.018 |     | NM     | 80CAS 01  |
| 460              | 90    |     | ITNA   | 85AKA 01  | 0.484                 | 0.018 | D   | NM     | 81CAS 01  |

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Ti (ug/g)</u> |       |     |        |           | <u>U (ug/g) cont.</u> |       |     |        |           |
| 592              | 30    |     | ICPES  | 84NAD 01  | 1.29                  | 0.04  |     | DNA    | 85GAU 04  |
| 1310             | 20    |     | ICPES  | 85HAR 01  | 1.29                  | 0.07  |     | DNA    | 86GLA 01  |
| 1437.6           | 119.8 |     | ICPES  | 85PEA 01  | 1.3                   | 0.02  |     | ICPES  | 83MAH 05  |
| 1480             | 30    |     | TCGS   | 79AND 01  | 1.3                   | 0.1   | 35  | DNA    | 81GLA 04  |
| 1550             | 40    | D   | TCGS   | 80GER 01  | 1.3                   | 0.11  |     | ITNA   | 83OBR 01  |
| 1550             | 40    | D   | TCGS   | 80AND 01  | 1.3                   | 0.12  |     | ITNA   | 85SUN 01  |
| 1550             | 40    |     | TCGS   | 79FAI 01  | 1.31                  | 0.09  |     | ITNA   | 82JER 01  |
| 1560             | 70    |     | ITNA   | 83JER 01  | 1.33                  | 0.04  |     | DNA    | 86GAU 01  |
| 1570             | 100   |     | ITNA   | 86GLA 01  | 1.4                   |       |     | DNA    | 84GLA 11  |
| 1580             | 80    |     | ITNA   | 82JER 01  | 1.45                  | 0.05  | 35  | DNA    | 81GLA 03  |
| 1600             |       | 34  | WXRF   | 82MIL 01  | 1.5                   | 0.13  |     | ITNA   | 84CHA 02  |
| 1600             | 40    |     | ICPES  | 82NAD 02  |                       |       |     |        |           |
| 1620             | 45    |     | ITNA   | 83OBR 01  |                       |       |     |        |           |
| 1630             |       |     | ICPES  | 81MER 03  |                       |       |     |        |           |
| 1630             | 70    |     | ITNA   | 80GER 01  | 0.448                 | 0.012 | D   | NM     | 81CAS 01  |
| 1700             | 50    |     | ICPES  | 83MAH 05  | 0.448                 | 0.012 |     | NM     | 80CAS 01  |
| 1700             | 300   |     | CPXRF  | 80KIR 01  |                       |       |     |        |           |
| 1720             | 170   |     | ITNA   | 80GAR 01  |                       |       |     |        |           |
| 1756             | 128   |     | ITNA   | 85SUN 01  |                       |       |     |        |           |
| 1760             |       |     | AA     | 82NAD 02  | 22.8                  | 1.9   | D   | NM     | 81CAS 01  |
| 1800             | 100   |     | XRF    | 79CAH 01  | 22.8                  | 1.9   |     | NM     | 80CAS 01  |
| 1800             | 300   | 34  | COLOR  | 83BET 01  |                       |       |     |        |           |
| 1900             |       | 34  | COLOR  | 83BET 01  |                       |       |     |        |           |
| 2230             |       |     | WXRF   | 83GAR 01  |                       |       |     |        |           |
| 5990             |       |     | EXRF   | 82EBD 02  | 0.444                 | 0.016 |     | NM     | 80CAS 01  |
|                  |       |     |        |           | 0.444                 | 0.016 | D   | NM     | 81CAS 01  |
| <u>Tl (ug/g)</u> |       |     |        |           | <u>U-234 (pCi/g)</u>  |       |     |        |           |
| <                | 1     | L   | WXRF   | 82MIL 01  |                       |       |     |        |           |
| <u>Tm (ng/g)</u> |       |     |        |           | <u>U-235 (fCi/g)</u>  |       |     |        |           |
|                  |       |     |        |           | 22.8                  | 1.9   | D   | NM     | 81CAS 01  |
|                  |       |     |        |           | 22.8                  | 1.9   |     | NM     | 80CAS 01  |
| <u>U (ug/g)</u>  |       |     |        |           | <u>U-238 (pCi/g)</u>  |       |     |        |           |
|                  |       |     |        |           | 0.444                 | 0.016 |     | NM     | 80CAS 01  |
|                  |       |     |        |           | 0.444                 | 0.016 | D   | NM     | 81CAS 01  |
| <u>V (ug/g)</u>  |       |     |        |           |                       |       |     |        |           |
|                  |       |     |        |           | 37.4                  | 3.1   | 11  | AA     | 82LIN 03  |
|                  |       |     |        |           | 39                    | 2     |     | ITNA   | 83JER 01  |
|                  |       |     |        |           | 40.5                  | 0.9   |     | ICPES  | 85HAR 01  |
|                  |       |     |        |           | 41                    | 2.05  |     | AA     | 82KAM 01  |
|                  |       |     |        |           | 41.6                  | 2.2   |     | ITNA   | 85SUN 01  |
|                  |       |     |        |           | 42                    | 2     |     | ICPES  | 83MAH 05  |
|                  |       |     |        |           | 42                    | 2.4   | 11  | AA     | 82LIN 03  |
|                  |       |     |        |           | 42                    | 4.2   |     | FAA    | 80LAN 01  |
|                  |       |     |        |           | 43                    |       | 34  | WXRF   | 82MIL 01  |
|                  |       |     |        |           | 43                    | 1     |     | ITNA   | 82JER 01  |
|                  |       |     |        |           | 43                    | 4     |     | AA     | 83RAP 01  |
|                  |       |     |        |           | 43.4                  | 1.8   |     | ITNA   | 83OBR 01  |
|                  |       |     |        |           | 44                    |       |     | ITNA   | 84CLE 01  |
|                  |       |     |        |           | 44                    | 3     |     | ITNA   | 80GER 01  |
|                  |       |     |        |           | 44                    | 7     | 11  | AA     | 84NAK 01  |
|                  |       |     |        |           | 44.3                  |       |     | ICPES  | 81MER 03  |
|                  |       |     |        |           | 45                    | 2     |     | ITNA   | 84GLA 02  |
|                  |       |     |        |           | 45.5                  | 1.6   | 11  | AA     | 84NAK 01  |
|                  |       |     |        |           | 46                    |       | 34  | FAA    | 83BET 01  |
|                  |       |     |        |           | 46                    |       | 6   | AE+AF  | 82GOL 01  |
|                  |       |     |        |           | 46                    | 2     |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 46                    | 8     | 34  | FAA    | 83BET 01  |

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

| Conc                  | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>V (ug/g) cont.</u> |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 46                    | 8.2   |     | CPXRF  | 80KIR 01  | 19               | 4     |     | ITNA   | 86GLA 01  |
| 46.9                  | 2.5   |     | ITNA   | 80GAR 01  | 24.3             | 4     |     | AA     | 79CAH 01  |
| 48                    | 7     | 6   | AE+AF  | 82GOL 01  | 25               | 2     |     | ITNA   | 84CHA 02  |
| 49                    |       |     | ITNA   | 85GAU 04  | 25               | 3     | 34  | FAA    | 83BET 01  |
| 49.6                  | 1.7   | 11  | AA     | 82LIN 03  | 26               | 0.78  |     | AA     | 82KAM 01  |
| 67                    | 3     |     | ICPES  | 84NAD 01  | 26               | 1     |     | XRF    | 85HAR 01  |
| <u>W (ng/g)</u>       |       |     |        |           | 26.6             | 0.1   | 11  | AA     | 82LIN 03  |
| 600                   | 200   |     | ITNA   | 80GER 01  | 27               | 6     |     | ITNA   | 79CAH 01  |
| 780                   | 230   |     | ITNA   | 83OBR 01  | 27.1             |       |     | ICPES  | 81MER 03  |
| 790                   | 20    |     | ITNA   | 84SUZ 02  | 27.5             | 3     |     | AA     | 83RAP 01  |
| 890                   | 150   |     | ITNA   | 81JIN 01  | 27.6             | 1.8   | 11  | AA     | 84NAK 01  |
| 920                   | 150   |     | ITNA   | 85SUN 01  | 27.6             | 2.4   | 11  | AA     | 84NAK 01  |
| 1000                  | 300   |     | ITNA   | 79CAH 01  | 27.7             | 1.4   | 11  | AA     | 82LIN 03  |
| <u>Y (ug/g)</u>       |       |     |        |           | 28               |       | 34  | WXRF   | 82MIL 01  |
| 5.8                   | 0.5   |     | PAA    | 80GER 01  | 28               | 0.4   |     | ICPES  | 83MAH 05  |
| 8.3                   | 0.5   |     | ICPES  | 82CRO 01  | 28               | 1     |     | ICPES  | 85HAR 01  |
| 9.5                   |       | 34  | WXRF   | 82MIL 01  | 28               | 2     |     | ITNA   | 83JER 01  |
| 9.7                   | 0.4   |     | ICPES  | 85HAR 01  | 28               | 3.7   |     | CPXRF  | 80KIR 01  |
| <u>Yb (ug/g)</u>      |       |     |        |           | 29               |       | 34  | FAA    | 83BET 01  |
| 0.9                   | 0.01  |     | ICPES  | 82CRO 01  | 30               | 3     |     | ITNA   | 80KOS 01  |
| 0.98                  | 0.07  |     | ITNA   | 81JIN 01  | 31               | 6     |     | ITNA   | 80GER 01  |
| 0.98                  | 0.08  |     | ITNA   | 80GER 01  | 39               | 8     |     | ICPES  | 84NAD 01  |
| 1.04                  | 0.17  |     | ITNA   | 85SUN 01  | <u>Zr (ug/g)</u> |       |     |        |           |
| 1.09                  | 0.06  |     | ITNA   | 85GAU 04  | <                | 140   |     | ITNA   | 86GLA 01  |
| 1.1                   |       |     | ITNA   | 85GRE 02  | 47               | 6     |     | ITNA   | 80GER 01  |
| 1.1                   | 0.1   | 5   | ITNA   | 80TOU 01  | 55               |       | 34  | WXRF   | 82MIL 01  |
| 1.13                  | 0.07  |     | ITNA   | 86GLA 01  | 57               | 5     |     | PAA    | 80GER 01  |
| 1.14                  | 0.2   |     | ITNA   | 84CHA 02  |                  |       |     |        |           |
| 1.19                  | 0.06  |     | ITNA   | 84SUZ 02  |                  |       |     |        |           |
| 1.2                   | 0.1   |     | ITNA   | 79CAH 01  |                  |       |     |        |           |

TABLE 1632B-1: COMPILED DATA FOR NBS SRM 1632B TRACE ELEMENTS IN COAL  
(revised 3/1/86)

| ELEMENT  | UNITS  | NBS   |         |
|----------|--------|-------|---------|
|          |        | Mean  | ± SD    |
| ASH      | %      | 6.79  | ± 0.16  |
| Al       | ug/g   | 8550  | ± 190   |
| As       | ug/g   | 3.72  | ± 0.09  |
| Ba       | ug/g   | 67.5  | ± 2.1   |
| Br       | ug/g   | 17    |         |
| C-Total  | %      | 78.11 | ± 0.37  |
| Ca       | ug/g   | 2040  | ± 60    |
| Cd       | ng/g   | 57.3  | ± 2.7   |
| Ce       | ug/g   | 9     |         |
| Cl       | ug/g   | 1260  |         |
| Co       | ug/g   | 2.29  | ± 0.17  |
| Cr       | ug/g   | 11    |         |
| Cs       | ng/g   | 440   |         |
| Cu       | ug/g   | 6.28  | ± 0.30  |
| Eu       | ng/g   | 170   |         |
| Fe       | ug/g   | 7590  | ± 450   |
| H        | %      | 5.07  | ± 0.06  |
| Heat     | BTU/lb | 14005 | ± 35    |
| Hf       | ng/g   | 430   |         |
| K        | ug/g   | 748   | ± 28    |
| La       | ug/g   | 5.1   |         |
| Li       | ug/g   | 10    |         |
| Mg       | ug/g   | 383   | ± 8     |
| Mn       | ug/g   | 12.4  | ± 1     |
| Mo       | ug/g   | 0.9   |         |
| N        | %      | 1.56  | ± 0.07  |
| Na       | ug/g   | 515   | ± 11    |
| Ni       | ug/g   | 6.10  | ± 0.27  |
| Pb       | ug/g   | 3.67  | ± 0.26  |
| Rb       | ug/g   | 5.05  | ± 0.11  |
| S        | %      | 1.89  | ± 0.06  |
| Sb       | ng/g   | 240   |         |
| Sc       | ug/g   | 1.9   |         |
| Se       | ug/g   | 1.29  | ± 0.11  |
| Si       | %      | 1.4   |         |
| Sm       | ug/g   | 0.87  |         |
| Sr       | ug/g   | 102   |         |
| Th       | ug/g   | 1.342 | ± 0.036 |
| Ti       | ug/g   | 454   | ± 17    |
| U        | ng/g   | 436   | ± 12    |
| V        | ug/g   | 14    |         |
| Volatile | %      | 35.4  | ± 1.1   |
| W        | ug/g   | 480   |         |
| Zn       | ug/g   | 11.89 | ± 0.78  |

TABLE 1633-1: COMPILED DATA FOR NBS SRM 1633 TRACE ELEMENTS IN COAL FLY ASH (revised 3/1/86)

| ELE   | UNITS | NBS         |      | CONSENSUS        |       | MEDIAN      | RANGE            | AA               |                 | HAA             |                 | ICPES     |     | XRF       |     | PAA       |     | OES       |     | OTHER METHODS |           |
|-------|-------|-------------|------|------------------|-------|-------------|------------------|------------------|-----------------|-----------------|-----------------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|---------------|-----------|
|       |       | Mean ± SD   | (n)  | Mean ± SD        | (n)   |             |                  | Mean ± SD        | (n)             | Mean ± SD       | (n)             | Mean ± SD | (n) | Mean ± SD | (n) | Mean ± SD | (n) | Mean ± SD | (n) | Method        | Mean ± SD |
| Ag    | ng/g  | ---         | ---  | 300 ± 50 (3)     | 300   | 258 - 350   | 350 (1)          | 258 (1)          | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Al    | X     | ---         | ---  | 12.6 ± 0.6 (37)  | 12.6  | 11.6 - 14.1 | 13.0 ± 0.7 (4)   | 12.4 ± 0.6 (17)  | 12.3 ± 0.7 (8)  | 11.7 (1)        | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| As    | ug/g  | 61 ± 6      | (59) | 61 ± 4 (59)      | 60.4  | 54 - 69.5   | 61 ± 4 (7)       | 60 ± 4 (28)      | 60 ± 8 (5)      | 64 ± 2 (3)      | 62.5 ± 1.7 (8)  | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| As    | ug/g  | ---         | ---  | ---              | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| As    | ug/g  | ---         | ---  | 5.2 ± 2.6 (3)    | 4.84  | 2.75 - 8.0  | ---              | 5.2 ± 2.6 (3)    | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Au    | ng/g  | ---         | ---  | 4.64 ± 35 (8)    | 450   | 320 - 600   | ---              | ---              | 428 (2)         | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| B     | ug/g  | ---         | ---  | ---              | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Ba    | ug/g  | ---         | ---  | 2665 ± 160 (46)  | 2660  | 2300 - 3000 | 2570 ± 300 (3)   | 2670 ± 130 (29)  | 2580 ± 300 (6)  | 2410 ± 410 (4)  | 2605 (2)        | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Be    | ug/g  | 12          | ---  | 12.1 ± 1.0 (18)  | 12    | 10.1 - 14   | 12.2 ± 0.8 (12)  | ---              | 12.3 ± 1.7 (5)  | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Bi    | ug/g  | ---         | ---  | 2 ± 2 (3)        | 1.08  | 0.7 - 4.5   | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Br    | ug/g  | ---         | ---  | 8.4 ± 2.2 (22)   | 7.52  | 5.8 - 12.1  | ---              | 8.4 ± 2.3 (19)   | ---             | 7.75 (2)        | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| C     | X     | ---         | ---  | 3.3 ± 0.2 (3)    | 3.3   | 3.05 - 3.45 | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Ca    | X     | ---         | ---  | 4.65 ± 0.36 (46) | 4.62  | 3.92 - 5.3  | 4.5 ± 0.3 (3)    | 4.48 ± 0.25 (15) | 4.63 ± 0.13 (7) | 4.7 ± 0.6 (6)   | 4.8 ± 0.6 (5)   | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Cd    | ug/g  | 1.45 ± 0.06 | ---  | 1.47 ± 0.15 (36) | 1.5   | 1.2 - 1.85  | 1.46 ± 0.14 (15) | 1.36 ± 0.20 (5)  | 1.8 ± 0.4 (3)   | ---             | 1.32 ± 0.17 (5) | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Cd    | ug/g  | ---         | ---  | ---              | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Cd    | ug/g  | ---         | ---  | ---              | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Ce    | ug/g  | ---         | ---  | 149 ± 10 (33)    | 150.6 | 125 - 176   | ---              | 150 ± 7 (20)     | 148 (2)         | 154 ± 6 (3)     | 152.7 ± 0.6 (3) | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Cl    | ug/g  | ---         | ---  | 38 ± 13 (14)     | 40.6  | 19.6 - 58   | ---              | 40 ± 13 (10)     | ---             | ---             | 22.3 (2)        | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Co    | ug/g  | 38          | ---  | 40 ± 3 (46)      | 40    | 32 - 48     | 40 ± 5 (6)       | 39.4 ± 1.9 (24)  | 37 ± 10 (7)     | ---             | 40 ± 3 (4)      | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Cr    | ug/g  | 131 ± 2     | ---  | 127 ± 10 (58)    | 129.2 | 103 - 159   | 126 ± 10 (10)    | 128 ± 7 (27)     | 115 ± 11 (8)    | 131 ± 17 (5)    | 136 ± 6 (4)     | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Cs    | ug/g  | ---         | ---  | 8.6 ± 0.6 (26)   | 8.4   | 7.3 - 10    | ---              | 8.5 ± 0.5 (22)   | ---             | ---             | 8 (1)           | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Cu    | ug/g  | 128 ± 5     | ---  | 129 ± 7 (39)     | 129   | 115 - 142   | 126 ± 4 (11)     | 128 ± 12 (6)     | 130 ± 7 (8)     | 130 ± 6 (7)     | 138 ± 3 (3)     | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Dy    | ug/g  | ---         | ---  | 10.2 ± 1.1 (12)  | 10.2  | 9 - 12.1    | ---              | 9.8 ± 0.8 (10)   | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Er    | ug/g  | ---         | ---  | 34 ± 48 (3)      | 11    | 2.1 - 89    | ---              | 89 (1)           | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Eu    | ug/g  | ---         | ---  | 2.64 ± 0.19 (25) | 2.6   | 2.3 - 3.1   | ---              | 2.60 ± 0.15 (22) | 2.5 (2)         | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| F     | ug/g  | ---         | ---  | 17 ± 6 (3)       | 20    | 10 - 20     | 20 (1)           | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Fe    | X     | ---         | ---  | 6.16 ± 0.27 (60) | 6.2   | 5.53 - 6.8  | 6.3 ± 0.4 (8)    | 6.13 ± 0.26 (24) | 6.12 ± 0.29 (9) | 6.11 ± 0.12 (8) | 6.09 (2)        | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Fe    | X     | ---         | ---  | ---              | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Ga    | ug/g  | ---         | ---  | 42 ± 4 (16)      | 41    | 34.3 - 50   | 58 (1)           | 41 ± 3 (11)      | ---             | 43 ± 5 (3)      | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Gd    | ug/g  | ---         | ---  | 11.6 ± 0.4 (6)   | 11.6  | 11 - 12.1   | ---              | 11.5 ± 0.4 (3)   | 12.1 (1)        | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Ge    | ug/g  | ---         | ---  | 24 ± 3 (7)       | 25    | 19 - 26.8   | ---              | ---              | 26.8 (1)        | 22.5 (2)        | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| H     | ug/g  | ---         | ---  | 1100 (2)         | ---   | 1000 - 1200 | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| H2O-  | X     | ---         | ---  | 0.03 (1)         | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| H2O-T | X     | ---         | ---  | 0.17 (1)         | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| H2SO4 | ug/g  | ---         | ---  | < 1000           | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Hf    | ug/g  | ---         | ---  | 7.6 ± 0.5 (21)   | 7.62  | 6.5 - 8.2   | ---              | 7.6 ± 0.5 (21)   | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Hg    | ng/g  | 140 ± 10    | ---  | 136 ± 17 (15)    | 137   | 100 - 170   | 128 ± 9 (5)      | 144 ± 10 (6)     | ---             | ---             | 167 ± 34 (5)    | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Ho    | ug/g  | ---         | ---  | 2.0 ± 0.9 (6)    | 1.94  | 0.82 - 3.6  | ---              | 1.96 ± 0.03 (4)  | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| I     | ug/g  | ---         | ---  | 2.8 ± 0.4 (6)    | 2.9   | 2 - 3.4     | ---              | 2.6 ± 0.6 (3)    | ---             | ---             | 2.85 (2)        | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| In    | ng/g  | ---         | ---  | 220 ± 80 (10)    | 16    | 118 - 320   | ---              | 200 ± 90 (8)     | ---             | ---             | 285 (2)         | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Ir    | ng/g  | ---         | ---  | 17.6 ± 1.7 (3)   | 18.6  | 15.6 - 18.6 | ---              | 17.6 ± 1.7 (3)   | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| K     | X     | 1.72        | ---  | 1.69 ± 0.09 (47) | 1.71  | 1.51 - 1.9  | 1.66 ± 0.05 (4)  | 1.72 ± 0.11 (21) | 1.65 ± 0.10 (7) | 1.68 ± 0.05 (4) | 1.59 ± 0.01 (3) | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| K     | X     | ---         | ---  | ---              | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| La    | ug/g  | ---         | ---  | 79 ± 5 (33)      | 80    | 68 - 91     | ---              | 80 ± 5 (26)      | 75 ± 6 (3)      | 77 ± 5 (3)      | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Li    | ug/g  | ---         | ---  | 170 ± 80 (5)     | 161   | 80 - 300    | 80 (1)           | ---              | 174 (2)         | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Lu    | ug/g  | ---         | ---  | 1.1 ± 0.3 (15)   | 1.01  | 0.78 - 1.7  | ---              | 1.11 ± 0.24 (13) | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Mg    | X     | ---         | ---  | 1.5 ± 0.3 (35)   | 1.5   | 1.01 - 2.1  | 1.29 ± 0.14 (3)  | 1.72 ± 0.25 (16) | 1.26 ± 0.11 (7) | ---             | 1.48 ± 0.03 (4) | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Mn    | ug/g  | 493 ± 7     | ---  | 494 ± 20 (59)    | 493   | 440 - 540   | 492 ± 24 (11)    | 491 ± 18 (22)    | 488 ± 19 (7)    | 508 ± 17 (7)    | 493 ± 2 (4)     | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| Mo    | ug/g  | ---         | ---  | 28 ± 5 (15)      | 28    | 20 - 37     | 36 (1)           | 27 ± 6 (5)       | 29 (2)          | 26.5 (2)        | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| N     | ug/g  | ---         | ---  | < 1000           | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| NH4   | ug/g  | ---         | ---  | < 100            | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| NO2   | ug/g  | ---         | ---  | < 100            | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |
| NO3   | ug/g  | ---         | ---  | < 100            | ---   | ---         | ---              | ---              | ---             | ---             | ---             | ---       | --- | ---       | --- | ---       | --- | ---       | --- | ---           | ---       |

TABLE 1633-1: COMPILED DATA FOR NBS SRM 1633 TRACE ELEMENTS IN COAL FLY ASH (revised 3/1/86)

| ELE    | UNITS | NBS        | CONSENSUS        | MEDIAN | RANGE       | AA              |                  | NAA            |                | ICPES     |                 | XRF       |                  | PAA       |       | OES            |     | OTHER METHODS |           |
|--------|-------|------------|------------------|--------|-------------|-----------------|------------------|----------------|----------------|-----------|-----------------|-----------|------------------|-----------|-------|----------------|-----|---------------|-----------|
|        |       |            |                  |        |             | Mean ± SD       | (n)              | Mean ± SD      | (n)            | Mean ± SD | (n)             | Mean ± SD | (n)              | Mean ± SD | (n)   | Mean ± SD      | (n) | Method        | Mean ± SD |
| Na     | ug/g  | ---        | 3130 ± 200 (41)  | 3200   | 2658 - 3600 | 3170 ± 120 (4)  | 3080 ± 240 (21)  | 3100 ± 140 (7) | ---            | ---       | 3600 ± 300 (4)  | 2950      | 3240             | (2)       | 14AAA | 3300           | (2) | TCGS          |           |
| Nb     | ug/g  | ---        | ---              | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           | ---       |
| Nd     | ug/g  | ---        | 29 ± 20 (4)      | 26     | 7 - 56      | ---             | ---              | ---            | 27             | (2)       | ---             | ---       | 3200             | (1)       | SSMS  | ---            | --- | ---           | ---       |
| Ni     | ug/g  | ---        | 64 ± 6 (14)      | 62     | 57.8 - 81   | ---             | 63 ± 4 (10)      | 94             | (1)            | ---       | ---             | ---       | 75               | (2)       | SSMS  | 62.0           | (2) | TCGS          |           |
| Ni     | ug/g  | 98 ± 3     | 98 ± 6 (45)      | 98.5   | 84 - 110    | 96 ± 9 (8)      | 97 ± 14 (11)     | 101 ± 14 (6)   | 98 ± 6 (6)     | ---       | 96 ± 3 (7)      | 120       | 106              | (2)       | 14AAA | 99             | (1) | AF            |           |
| Ni     | ug/g  | ---        | ---              | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 96.47 ± 0.12 (3) | (3)       | IOHS  | 98             | (1) | POL           |           |
| Ni     | ug/g  | ---        | ---              | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 102              | (2)       | SSMS  | ---            | --- | ---           |           |
| O      | %     | ---        | 47.02 (1)        | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 47.02            | (1)       | 14AAA | ---            | --- | ---           |           |
| Os     | ng/g  | ---        | < 400            | ---    | ---         | ---             | < 4000           | ---            | ---            | ---       | ---             | ---       | < 400            | ---       | UU    | ---            | --- | ---           |           |
| P      | ug/g  | ---        | 1010 ± 180 (8)   | 1040   | 750 - 1300  | 880 (1)         | ---              | 940 ± 130 (5)  | ---            | ---       | ---             | ---       | 1900             | (1)       | COLOR | 1300           | (1) | SSMS          |           |
| Pb     | ug/g  | 70 ± 4     | 72 ± 6 (39)      | 71     | 62 - 82     | 74 ± 7 (13)     | 71 (1)           | 69 ± 13 (6)    | 67 ± 3 (4)     | ---       | 70 ± 3 (6)      | 74.5      | 67               | (1)       | POL   | 78.0           | (2) | IOHS          |           |
| Pb     | ug/g  | ---        | ---              | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 76               | (1)       | AE-AF | 69             | (2) | SSMS          |           |
| Pb     | ug/g  | ---        | ---              | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 68.8             | (1)       | POT   | ---            | --- | ---           |           |
| Pb-210 | pCi/g | ---        | ---              | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 3.37             | (1)       | NH    | ---            | --- | ---           |           |
| Pd     | ng/g  | ---        | < 2              | ---    | ---         | ---             | < 2              | ---            | < 4000         | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Pr     | ug/g  | ---        | 31 ± 8 (3)       | 28     | 24 - 40     | ---             | ---              | 24             | (1)            | ---       | ---             | ---       | 34               | (2)       | SSMS  | ---            | --- | ---           |           |
| Pt     | ug/g  | ---        | 0.74 ± 0.55 (3)  | 0.451  | 0.4 - 1.38  | ---             | 0.92 (2)         | ---            | ---            | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Rb     | ug/g  | 112        | 115 ± 8 (30)     | 115    | 96 - 130    | ---             | 116 ± 8 (19)     | ---            | 115 ± 7 (5)    | ---       | 109 ± 16 (4)    | 110       | 120              | (1)       | SSMS  | 120            | (2) | 14AAA         |           |
| Re     | ng/g  | ---        | < 200            | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Rh     | ug/g  | ---        | < 0.5            | ---    | ---         | ---             | ---              | ---            | < 4            | ---       | ---             | < 30      | < 0.5            | ---       | UU    | ---            | --- | ---           |           |
| Ru     | ug/g  | ---        | 1.6 (2)          | ---    | 0.26 - 3    | ---             | 0.26 (1)         | ---            | 3              | (1)       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| S      | ug/g  | ---        | 4500 ± 500 (5)   | 4400   | 3900 - 5090 | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 4100 ± 260 (3)   | (3)       | TCGS  | 5010           | (2) | NH            |           |
| S04    | %     | ---        | 0.98 (1)         | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Sb     | ug/g  | ---        | 6.8 ± 0.7 (37)   | 6.9    | 5 - 8.4     | 6.63 (2)        | 6.8 ± 0.6 (25)   | 6.7 (2)        | ---            | ---       | 7.07 ± 0.06 (5) | ---       | 6.9              | (1)       | SSMS  | 8.3            | (1) | 14AAA         |           |
| Sc     | ug/g  | ---        | 26 ± 3 (31)      | 26.9   | 20 - 32     | ---             | 27.0 ± 1.5 (22)  | 22 (2)         | ---            | ---       | 23.8 (2)        | 23        | 35               | (2)       | 14AAA | ---            | --- | ---           |           |
| Se     | ug/g  | 9.4 ± 0.5  | 9.6 ± 0.6 (44)   | 9.5    | 8.7 - 11    | 9.48 (2)        | 9.7 ± 0.7 (25)   | 9.1 (2)        | 9.6 ± 1.2 (3)  | ---       | 9.76 ± 0.26 (5) | ---       | 9.7              | (2)       | SSMS  | 9.35           | (2) | GCMS          |           |
| Se     | ug/g  | ---        | ---              | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 9.35             | (1)       | OCPEs | 4.5            | (1) | ASV           |           |
| Se     | ug/g  | ---        | ---              | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 9.7              | (1)       | COLOR | ---            | --- | ---           |           |
| Si     | %     | ---        | 22.0 ± 1.0 (17)  | 22     | 20 - 23.5   | 22.3 (2)        | 23.5 (1)         | 21.8 ± 1.2 (3) | 22.1 ± 0.8 (3) | ---       | 20.5 (2)        | ---       | 22.7 ± 1.6 (3)   | (3)       | TCGS  | 22.7 ± 0.3 (3) | (3) | 14AAA         |           |
| Sm     | ug/g  | ---        | 12.9 ± 1.5 (27)  | 12.9   | 10.05 - 17  | ---             | 12.7 ± 1.1 (22)  | 15.8 (1)       | ---            | ---       | ---             | ---       | 12.6             | (2)       | TCGS  | 18.5           | (2) | SSMS          |           |
| Sn     | ug/g  | ---        | 8.1 ± 3.8 (10)   | 6.7    | 2.8 - 12.7  | 12.7 (1)        | 10.2 (1)         | ---            | 5.85 (2)       | ---       | 12.2 (2)        | 10        | 2.8              | (1)       | SSMS  | 5.7            | (1) | NH            |           |
| Sr     | ug/g  | 1380       | 1380 ± 100 (42)  | 1380   | 1200 - 1620 | 1340 (1)        | 1420 ± 120 (23)  | 1390 ± 140 (5) | 1340 ± 70 (5)  | ---       | 1310 ± 70 (4)   | ---       | 1340 ± 60 (3)    | (3)       | 14AAA | 1400           | (1) | SSMS          |           |
| Sr     | ug/g  | ---        | 1.90 ± 0.14 (21) | 1.9    | 1.6 - 2.2   | ---             | 1.90 ± 0.15 (20) | ---            | ---            | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Ta     | ug/g  | ---        | 2.0 ± 0.5 (20)   | 1.99   | 1.2 - 3.12  | ---             | 1.9 ± 0.3 (17)   | ---            | ---            | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Tb     | ug/g  | ---        | 1.8 ± 0.8 (3)    | 2.3    | 0.92 - 9.9  | 0.92 (1)        | 9.9 (1)          | ---            | ---            | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Te     | ug/g  | 24         | 24.5 ± 1.8 (25)  | 24.4   | 20 - 28     | ---             | 24.6 ± 1.2 (20)  | ---            | 21             | (1)       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Th-228 | pCi/g | ---        | 2.23 (1)         | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Th-230 | pCi/g | ---        | 3.74 (1)         | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Th-232 | pCi/g | ---        | 2.45 (1)         | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | ---              | ---       | ---   | ---            | --- | ---           |           |
| Ti     | ug/g  | ---        | 7100 ± 500 (45)  | 7230   | 6000 - 8200 | 7600 ± 1000 (3) | 7000 ± 600 (18)  | 7100 ± 600 (8) | 7700 ± 500 (5) | ---       | 7420 ± 220 (5)  | 6650      | 7120 ± 140 (3)   | (3)       | TCGS  | 7450           | (2) | 14AAA         |           |
| Tl     | ug/g  | 4          | 4.0 ± 0.7 (8)    | 3.7    | 3.5 - 5.3   | 5 (1)           | ---              | ---            | ---            | ---       | 3.63 ± 0.13 (5) | ---       | 5.3              | (1)       | POT   | 3.8            | (1) | SSMS          |           |
| Tm     | ug/g  | ---        | 1.35 ± 0.06 (4)  | 1.3    | 1.3 - 1.43  | ---             | 1.36 ± 0.06 (3)  | ---            | ---            | ---       | ---             | ---       | 1.3              | (1)       | SSMS  | ---            | --- | ---           |           |
| U      | ug/g  | 11.6 ± 0.2 | 11.8 ± 1.0 (29)  | 11.8   | 9 - 13.8    | ---             | 11.8 ± 0.9 (18)  | ---            | 9              | (1)       | 11.8 ± 0.5 (5)  | ---       | 8.6              | (1)       | SSMS  | 11.75          | (2) | IOHS          |           |
| U      | ug/g  | ---        | ---              | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 8.6              | (1)       | FLUOR | 12             | (2) | GAMMA         |           |
| U-234  | pCi/g | ---        | 4.07 (1)         | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 4.07             | (1)       | NH    | ---            | --- | ---           |           |
| U-235  | pCi/g | ---        | 0.18 (1)         | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 0.1790           | (1)       | NH    | ---            | --- | ---           |           |
| U-238  | pCi/g | ---        | 4.01 (1)         | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 4.01             | (1)       | NH    | ---            | --- | ---           |           |
| V      | ug/g  | 214 ± 8    | 224 ± 24 (44)    | 223    | 174 - 295   | 260 ± 100 (4)   | 228 ± 15 (20)    | 225 ± 8 (7)    | 210 ± 50 (5)   | ---       | 209 (2)         | 220       | 190              | (1)       | TCGS  | 240            | (2) | SSMS          |           |
| W      | ug/g  | ---        | 4.8 ± 0.6 (16)   | 4.6    | 3.8 - 6     | ---             | 4.8 ± 0.7 (14)   | ---            | ---            | ---       | ---             | ---       | 4.6              | (1)       | SSMS  | ---            | --- | ---           |           |
| Y      | ug/g  | ---        | 64 ± 4 (11)      | 62     | 56 - 68     | ---             | ---              | 63.5 (2)       | 65 ± 4 (3)     | ---       | 64 ± 3 (4)      | 44        | 62               | (2)       | SSMS  | ---            | --- | ---           |           |
| Yb     | ug/g  | ---        | 6.5 ± 1.1 (24)   | 6.2    | 4.7 - 8.9   | ---             | 6.3 ± 1.0 (19)   | 6.55 (2)       | ---            | ---       | ---             | 5.7       | 8.5              | (2)       | SSMS  | ---            | --- | ---           |           |
| Zn     | ug/g  | 210 ± 20   | 211 ± 11 (63)    | 212    | 180.7 - 250 | 213 ± 9 (13)    | 209 ± 10 (19)    | 212 ± 11 (10)  | 207 ± 7 (7)    | ---       | 212 ± 6 (6)     | 210       | 201              | (1)       | AE-AF | 214            | (1) | AF            |           |
| Zn     | ug/g  | ---        | ---              | ---    | ---         | ---             | ---              | ---            | ---            | ---       | ---             | ---       | 250 ± 40         | (3)       | SSMS  | ---            | --- | ---           |           |
| Zr     | ug/g  | ---        | 300 ± 60 (23)    | 301    | 160 - 410   | ---             | 310 ± 90 (9)     | 256 (2)        | 302 ± 11 (3)   | ---       | 300 ± 2 (5)     | 160       | 400              | (1)       | SSMS  | 395            | (2) | 14AAA         |           |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Al (%) cont.</u> |       |     |        |           |
| <                | 100   | L   | ITNA   | 77CHA 01  | 12.99               | 0.47  |     | ICPES  | 81CHU 01  |
| <                | 100   | D   | ITNA   | 78RYA 01  | 13                  | 0.2   |     | TCGS   | 79AND 01  |
| <                | 300   | L   | ICPES  | 81CHU 01  | 13                  | 2.6   |     | OES    | 76WEW 01  |
| <                | 400   | D   | PAA    | 77CHA 01  | 13.6                | 0.5   |     | 14NAA  | 81WIL 01  |
| <                | 400   | L   | PAA    | 76CHA 01  | 14                  |       |     | OES    | 78SUG 01  |
| <                | 500   | L   | UU     | 80HEN 01  | 14                  | 1     |     | AA     | 80STO 02  |
| <                | 600   | L   | IENA   | 80GLA 03  | 14.1                | 2.8   |     | ITNA   | 81WAN 01  |
| <                | 1000  | L   | OES    | 76WEW 01  | 14.3                | 1.1   |     | ITNA   | 78NAD 02  |
| 258              | 20    |     | RTNA   | 77NAD 02  | 14.3                | 1.1   |     | ITNA   | 75NAD 02  |
| 300              |       |     | SSMS   | 83WEI 02  |                     |       |     |        |           |
| 350              |       |     | AA     | 76WEW 01  |                     |       |     |        |           |
| 1320             | 130   |     | PAA    | 74CHA 01  |                     |       |     |        |           |
| <u>Al (%)</u>    |       |     |        |           | <u>As (ug/g)</u>    |       |     |        |           |
| 10.4             | 0.6   |     | ITNA   | 78MAC 01  | 46                  |       |     | ITNA   | 78KEL 02  |
| 10.96            | 0.402 |     | ITNA   | 73SHE 01  | 49                  | 5     |     | ITNA   | 76KUC 01  |
| 11.1             | 0.6   |     | ICPES  | 85HAR 01  | 50                  |       | 6   | SSMS   | 78GUI 01  |
| 11.6             |       |     | ICPES  | 80NAD 01  | 54                  |       |     | ITNA   | 75KLE 01  |
| 11.7             | 2     |     | XRF    | 79SMI 01  | 54                  | 1     |     | IENA   | 78WAN 01  |
| 11.8             | 0.8   |     | ITNA   | 76BLO 01  | 54                  | 3     |     | ITNA   | 78MAC 01  |
| 11.9             |       |     | ICPES  | 84CLE 01  | 55                  |       |     | FAA    | 78GUI 01  |
| 12               | 1     |     | ITNA   | 76OND 01  | 55                  | 10    |     | ICPES  | 81CHU 01  |
| 12.1             | 0.5   |     | ITNA   | 76RAG 01  | 55.8                | 1.4   | H   | AE+AF  | 77FEL 01  |
| 12.2             | 0.3   |     | ITNA   | 77MAE 01  | 56                  |       |     | ICPES  | 80FLO 01  |
| 12.2             | 0.5   |     | 14NAA  | 81WIL 02  | 56                  | 1     | H   | FAE    | 79FEL 01  |
| 12.3             |       | 35  | TCGS   | 78GLA 04  | 56.6                | 3.6   |     | ITNA   | 81WAN 01  |
| 12.3             | 0.5   |     | ITNA   | 76WEW 01  | 57                  |       |     | ICPES  | 82NYG 01  |
| 12.3             | 0.6   | D   | ITNA   | 78RYA 01  | 57                  | 3     | 35  | NAA    | 81GLA 03  |
| 12.3             | 0.6   |     | ITNA   | 77CHA 01  | 57                  | 4     |     | ITNA   | 75OND 01  |
| 12.35            | 0.25  |     | ITNA   | 76STE 05  | 58                  |       | 13  | ICPES  | 84BOT 01  |
| 12.35            | 0.25  |     | ITNA   | 77ROW 03  | 58                  | 1     |     | ITNA   | 76BLO 01  |
| 12.4             | 0.3   | D   | NAA    | 79STE 01  | 58                  | 1     | 35  | RTNA   | 78GLA 02  |
| 12.4             | 0.7   | 35  | ITNA   | 81GLA 03  | 58                  | 2     |     | IENA   | 76STE 05  |
| 12.5             |       |     | ITNA   | 75KLE 01  | 58                  | 4     | D   | NAA    | 74OND 01  |
| 12.5             | 0.3   |     | ICPES  | 80NAD 01  | 58                  | 4     |     | FAA    | 78HAY 01  |
| 12.6             | 0.1   | 35  | ITNA   | 81GLA 02  | 58.1                | 1.6   |     | RTNA   | 81GAL 01  |
| 12.6             | 0.2   |     | ICPES  | 84BOT 01  | 58.1                | 1.6   | D   | RTNA   | 81GAL 02  |
| 12.6             | 0.2   |     | TCGS   | 79FAI 01  | 59                  |       |     | ITNA   | 78WEA 01  |
| 12.6             | 0.2   | D   | TCGS   | 80AND 01  | 59                  | 2     | 35  | VV     | 81GLA 04  |
| 12.6             | 0.4   |     | ITNA   | 73ABE 01  | 59                  | 3.5   |     | HAA    | 77SMI 01  |
| 12.6             | 0.7   |     | AA     | 76OND 01  | 59                  | 4     |     | ITNA   | 77CHA 01  |
| 12.7             |       |     | UU     | 80HEN 01  | 59                  | 4     | D   | ITNA   | 78RYA 01  |
| 12.7             |       |     | OES    | 80WAL 01  | 59.1                | 4.8   |     | IENA   | 77ROW 04  |
| 12.7             |       |     | ITNA   | 78WEA 01  | 59.8                | 2     |     | IENA   | 77ROW 03  |
| 12.7             |       |     | AA     | 79SIL 01  | 60                  |       |     | UU     | 80HEN 01  |
| 12.7             | 0.05  |     | FAA    | 77PIL 01  | 60                  | 2.6   | D   | PAA    | 77CHA 01  |
| 12.7             | 0.5   |     | ITNA   | 75OND 01  | 60                  | 2.6   |     | PAA    | 76CHA 01  |
| 12.7             | 0.5   |     | ICPES  | 84NAD 01  | 60                  | 2.6   |     | NAA    | 77JER 01  |
| 12.8             |       |     | ICPES  | 80FLO 01  | 60                  | 3     |     | GCMES  | 75TAL 01  |
| 12.8             | 0.3   |     | ITNA   | 78LAU 02  | 60.4                | 0.8   | 35  | IENA   | 80GLA 03  |
|                  |       |     |        |           | 60.7                | 2.6   |     | PAA    | 74CHA 01  |
|                  |       |     |        |           | 61                  |       |     | SSMS   | 83WEI 02  |
|                  |       |     |        |           | 61                  | 3     |     | RTNA   | 74ORV 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>As (ug/g) cont.</u> |       |     |        |           | <u>B (ug/g)</u>  |       |     |        |           |
| 61                     | 4     |     | ITNA   | 76OND 01  | 100              |       |     | UU     | 80HEN 01  |
| 61                     | 5     |     | ITNA   | 73ABE 01  | 320              |       |     | COLOR  | 79DAL 01  |
| 61                     | 6     |     | ITNA   | 84SIL 01  | 340              |       |     | OES    | 79DAL 01  |
| 61.2                   |       |     | FAA    | 75POL 01  | 407              |       |     | ICPES  | 80NAD 01  |
| 61.5                   | 2.4   | D   | NAA    | 79STE 01  | 433              | 4     | D   | TCGS   | 80AND 01  |
| 61.5                   | 2.4   |     | ITNA   | 77ROW 04  | 433              | 4     |     | TCGS   | 79FAI 01  |
| 61.5                   | 3     |     | PAA    | 75OND 01  | 443              | 5     |     | TCGS   | 79AND 01  |
| 62                     |       |     | XRF    | 78CAM 02  | 450              | 20    |     | ICPES  | 82OWE 01  |
| 63                     | 4     | 6   | PAA    | 82SEG 01  | 490              | 14    | 6   | TCGS   | 76GLA 01  |
| 63                     | 4     |     | PAA    | 80SEG 01  | 492              | 13    | 6   | TCGS   | 76GLA 01  |
| 63                     | 4     |     | FAE    | 80DSI 01  | 497              | 14    | 6   | TCGS   | 76GLA 01  |
| 63                     | 4     |     | ITNA   | 85FIL 01  | 500              | 29    |     | OES    | 76WEW 01  |
| 63                     | 4     | 6   | PAA    | 82SEG 01  | 600              |       |     | SSMS   | 83WEI 02  |
| 63                     | 7     |     | EXRF   | 77GIA 01  |                  |       |     |        |           |
| 63.7                   | 3.6   |     | HAA    | 82NAD 01  | <u>Ba (ug/g)</u> |       |     |        |           |
| 64                     |       |     | FAA    | 84SIL 01  | 1800             |       |     | XRF    | 76WEW 01  |
| 64                     | 1     |     | PAA    | 76KAT 03  | 2100             | 100   |     | 14NAA  | 81WIL 01  |
| 64                     | 2     |     | ITNA   | 78LAU 02  | 2100             | 200   |     | ICPES  | 84NAD 01  |
| 64                     | 4     |     | ITNA   | 76RAG 01  | 2300             | 100   |     | AA     | 76OND 01  |
| 65                     | 1     |     | PAA    | 76KAT 02  | 2370             |       |     | ICPES  | 80NAD 01  |
| 66                     | 1     |     | XRF    | 79SMI 01  | 2490             |       |     | ITNA   | 75MIL 01  |
| 66.3                   | 10.1  |     | FAA    | 82BEN 01  | 2500             |       |     | UU     | 80HEN 01  |
| 67.6                   | 0.6   |     | ITNA   | 75NAD 02  | 2500             | 250   |     | ITNA   | 81WAN 01  |
| 68                     | 6     |     | ITNA   | 78NAD 02  | 2500             | 300   |     | ITNA   | 76WEW 01  |
| 68                     | 12    |     | 14NAA  | 81WIL 02  | 2510             | 50    |     | IENA   | 77ROW 04  |
| 68                     | 12    |     | 14NAA  | 81WIL 01  | 2510             | 160   |     | ITNA   | 76RAG 01  |
| 68                     | 15    |     | ITNA   | 76WEW 01  | 2510             | 200   |     | ITNA   | 76OND 01  |
| 69.5                   | 7.6   |     | ITNA   | 73SHE 01  | 2520             |       |     | AA     | 79SIL 01  |
| 72                     |       | 6   | SSMS   | 78GUI 01  | 2540             |       |     | ICPES  | 84CLE 01  |
| 74                     |       | 13  | ICPES  | 84BOT 01  | 2540             |       |     | XRF    | 78CAM 02  |
| <u>Au (ng/g)</u>       |       |     |        |           | 2540             | 50    |     | IENA   | 77ROW 03  |
| <                      | 300   | L   | ICPES  | 81CHU 01  | 2540             | 50    | D   | NAA    | 79STE 01  |
| <                      | 500   | L   | UU     | 80HEN 01  | 2540             | 51    |     | IENA   | 76STE 05  |
| 2.75                   | 0.2   |     | RTNA   | 77NAD 02  | 2550             | 30    | D   | ITNA   | 77ROW 04  |
| 4.84                   | 0.13  |     | RTNA   | 77NAD 01  | 2550             | 30    | D   | NAA    | 79STE 01  |
| 8                      | 2     | D   | ITNA   | 78RYA 01  | 2550             | 110   |     | 14NAA  | 81WIL 02  |
| 8                      | 2     |     | ITNA   | 77CHA 01  | 2580             | 170   |     | ITNA   | 76STE 05  |
| 1700                   |       |     | ITNA   | 78WEA 01  | 2600             | 160   | D   | PAA    | 77CHA 01  |
|                        |       |     |        |           | 2600             | 160   |     | PAA    | 76CHA 01  |
|                        |       |     |        |           | 2600             | 170   | 5   | IENA   | 80GLA 03  |
|                        |       |     |        |           | 2600             | 300   |     | ITNA   | 78LAU 02  |
|                        |       |     |        |           | 2610             | 210   |     | PAA    | 74CHA 01  |
|                        |       |     |        |           | 2630             | 20    |     | XRF    | 79SMI 01  |
|                        |       |     |        |           | 2660             | 150   |     | ITNA   | 84GLA 02  |
|                        |       |     |        |           | 2670             | 85    |     | EXRF   | 77GIA 01  |
|                        |       |     |        |           | 2700             |       |     | ITNA   | 78WEA 01  |
|                        |       |     |        |           | 2700             | 200   |     | ITNA   | 78NAD 02  |
|                        |       |     |        |           | 2700             | 200   |     | ITNA   | 75OND 01  |
|                        |       |     |        |           | 2700             | 200   |     | ITNA   | 75NAD 02  |
|                        |       |     |        |           | 2710             | 190   | D   | ITNA   | 78RYA 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ba (ug/g) cont.</u> |       |     |        |           | <u>Bi (ug/g)</u> |       |     |        |           |
| 2710                   | 190   |     | ITNA   | 77CHA 01  | <                | 1     | L   | PAA    | 76CHA 01  |
| 2720                   | 80    | 5   | IENA   | 80GLA 03  | <                | 1     | D   | PAA    | 77CHA 01  |
| 2734                   | 167   |     | ITNA   | 73SHE 01  | <                | 10    | L   | OES    | 76WEW 01  |
| 2750                   | 140   | 5   | IENA   | 80GLA 03  | 0.7              |       |     | UU     | 80HEN 01  |
| 2780                   |       |     | ITNA   | 75KLE 01  | 1.08             |       |     | PAA    | 74CHA 01  |
| 2800                   |       |     | ICPES  | 80FLO 01  | 4.5              |       |     | SSMS   | 83WEI 02  |
| 2800                   | 60    |     | ITNA   | 85FIL 01  |                  |       |     |        |           |
| 2800                   | 100   | 35  | ITNA   | 81GLA 03  | <u>Br (ug/g)</u> |       |     |        |           |
| 2800                   | 100   | 9   | ITNA   | 78LAU 02  | 5.8              | 0.8   | 35  | IENA   | 79GLA 02  |
| 2800                   | 200   |     | ICPES  | 85HAR 01  | 6                |       |     | ITNA   | 75KLE 01  |
| 2800                   | 200   | 35  | ITNA   | 81GLA 02  | 6                | 1     |     | ITNA   | 78MAC 01  |
| 2840                   | 180   | 35  | NAA    | 81GLA 04  | 6                | 2     |     | EXRF   | 77GIA 01  |
| 2860                   | 70    |     | ICPES  | 84BOT 01  | 6.4              | 0.2   | 35  | ITNA   | 81GLA 03  |
| 2880                   | 100   |     | ITNA   | 77MAE 01  | 6.5              | 0.2   | 5   | IENA   | 80GLA 03  |
| 2900                   | 120   |     | FAA    | 76OWE 01  | 6.7              | 0.6   |     | ITNA   | 76RAG 01  |
| 2900                   | 200   | 5   | IENA   | 80GLA 03  | 6.9              | 0.3   | 35  | NAA    | 81GLA 04  |
| 3000                   |       |     | SSMS   | 83WEI 02  | 7                | 1     |     | ITNA   | 78LAU 02  |
| 3000                   | 600   |     | OES    | 76WEW 01  | 7.5              | 0.5   |     | ITNA   | 78NAD 02  |
| 3200                   | 400   |     | ITNA   | 78MAC 01  | 7.52             | 0.46  |     | ITNA   | 75NAD 02  |
| 3400                   | 400   |     | ITNA   | 73ABE 01  | 7.7              | 1.5   |     | IENA   | 76STE 05  |
| <u>Be (ug/g)</u>       |       |     |        |           | 8.4              | 1.5   |     | IENA   | 77ROW 03  |
| 5                      |       |     | UU     | 80HEN 01  | 9.2              | 0.6   | D   | NAA    | 79STE 01  |
| 9.56                   |       |     | FAA    | 75POL 01  | 9.2              | 0.8   |     | IENA   | 77ROW 04  |
| 10.1                   |       | 6   | FAA    | 79GEL 01  | 9.5              |       |     | XRF    | 78CAM 02  |
| 10.9                   |       |     | ICPES  | 80NAD 01  | 10               |       |     | UU     | 80HEN 01  |
| 11                     |       |     | ICPES  | 80FLO 01  | 11.2             | 3.5   | D   | ITNA   | 78RYA 01  |
| 11                     |       |     | OES    | 78SUG 01  | 11.2             | 3.5   |     | ITNA   | 77CHA 01  |
| 11.9                   | 0.3   |     | ICPES  | 84BOT 01  | 12               |       |     | ITNA   | 78WEA 01  |
| 12                     |       |     | AA     | 79SIL 01  | 12               | 4     |     | ITNA   | 75OND 01  |
| 12                     |       |     | AA     | 76WEW 01  | 12               | 4     |     | ITNA   | 73ABE 01  |
| 12                     | 0.8   |     | FAA    | 75OWE 01  | 12.1             | 1.5   |     | ITNA   | 73SHE 01  |
| 12                     | 1     | 35  | FAA    | 76GLA 02  | <u>C (%)</u>     |       |     |        |           |
| 12.1                   |       | 6   | FAA    | 79GEL 01  | 3.05             | 0.05  |     | CB     | 79SIL 01  |
| 12.3                   | 0.3   |     | FAA    | 76OWE 01  | 3.3              |       |     | UU     | 80HEN 01  |
| 12.4                   | 0.31  |     | AA     | 74RAI 01  | 3.45             | 0.02  |     | GRAV   | 79SIL 01  |
| 12.6                   |       | 6   | FAA    | 79GEL 01  | <u>Ca (%)</u>    |       |     |        |           |
| 12.6                   | 0.25  |     | ICPES  | 81CHU 01  | 1.15             | 0.02  |     | AA     | 82HAR 01  |
| 12.6                   | 0.5   |     | AA     | 76OND 01  | 3.5              |       |     | XRF    | 76WEW 01  |
| 13.2                   |       | 6   | FAA    | 79GEL 01  | 3.8              |       | 35  | TCGS   | 78GLA 04  |
| 13.5                   |       | 6   | FAA    | 79GEL 01  | 3.92             | 0.28  |     | PAA    | 74CHA 01  |
| 14                     | 0.95  |     | OES    | 76WEW 01  | 4.1              | 0.36  |     | ITNA   | 73SHE 01  |
| 15                     |       |     | ICPES  | 84CLE 01  | 4.2              |       |     | UU     | 80HEN 01  |
| 18.7                   | 0.5   |     | ICPES  | 84NAD 01  | 4.2              | 0.2   |     | ITNA   | 76RAG 01  |
|                        |       |     |        |           | 4.21             | 0.09  |     | ITNA   | 75NAD 02  |
|                        |       |     |        |           | 4.21             | 0.09  |     | ITNA   | 78NAD 02  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|---------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ca (%) cont.</u> |       |     |        |           | <u>Cd (ug/g)</u> |       |     |        |           |
| 4.3                 |       |     | AA     | 79SIL 01  | 0.93             |       |     | POT    | 82CHR 01  |
| 4.3                 | 0.2   |     | AA     | 76OND 01  | 1                |       |     | ITNA   | 76WEW 01  |
| 4.3                 | 0.3   | 35  | ITNA   | 81GLA 02  | 1.2              | 0.04  | 7   | AA     | 73TAL 01  |
| 4.34                |       |     | ITNA   | 75KLE 01  | 1.2              | 0.04  |     | FAA    | 74TAL 01  |
| 4.4                 | 0.18  |     | 14NAA  | 81WIL 02  | 1.2              | 0.1   | 6   | PAA    | 82SEG 01  |
| 4.4                 | 0.4   | D   | PAA    | 77CHA 01  | 1.2              | 0.2   | 6   | PAA    | 82SEG 01  |
| 4.4                 | 0.4   |     | ITNA   | 75OND 01  | 1.2              | 0.2   |     | PAA    | 80SEG 01  |
| 4.4                 | 0.4   |     | PAA    | 76CHA 01  | 1.3              | 0.25  |     | FAA    | 76OWE 01  |
| 4.5                 |       |     | ICPES  | 80FLO 01  | 1.38             | 0.14  |     | FAA    | 79GOD 01  |
| 4.5                 | 0.05  |     | ICPES  | 85HAR 01  | 1.4              | 0.16  |     | TCGS   | 79AND 01  |
| 4.5                 | 0.5   | D   | ITNA   | 78RYA 01  | 1.43             |       |     | FAA    | 78GUI 01  |
| 4.5                 | 0.5   |     | ITNA   | 77CHA 01  | 1.43             | 0.04  |     | RTNA   | 74ORV 01  |
| 4.5                 | 0.6   | 35  | IENA   | 80GLA 03  | 1.43             | 0.07  | D   | RTNA   | 81GAL 02  |
| 4.54                | 0.06  |     | ICPES  | 84BOT 01  | 1.43             | 0.07  |     | RTNA   | 81GAL 01  |
| 4.6                 |       |     | EXRF   | 78WEG 01  | 1.45             |       |     | FAA    | 75POL 01  |
| 4.6                 | 0.5   |     | ITNA   | 78LAU 02  | 1.45             | 0.04  |     | AA     | 75EPS 01  |
| 4.62                | 0.06  |     | ICPES  | 80NAD 01  | 1.45             | 0.06  |     | RTNA   | 84DEL 01  |
| 4.62                | 0.15  |     | EXRF   | 78PEL 01  | 1.46             |       |     | AE+AF  | 77FEL 01  |
| 4.65                | 0.15  |     | ICPES  | 81CHU 01  | 1.46             | 0.05  |     | AA     | 74RAI 01  |
| 4.69                | 0.14  | D   | NAA    | 79STE 01  | 1.5              |       |     | POL    | 74MAI 01  |
| 4.69                | 0.14  |     | ITNA   | 77ROW 03  | 1.5              | 0.07  |     | TCGS   | 79FAI 01  |
| 4.69                | 0.14  |     | ITNA   | 76STE 05  | 1.5              | 0.07  | D   | TCGS   | 80AND 01  |
| 4.7                 |       |     | OES    | 80WAL 01  | 1.5              | 0.09  | 7   | AA     | 73TAL 01  |
| 4.7                 | 0.3   |     | ITNA   | 77MAE 01  | 1.5              | 0.09  |     | FAA    | 74TAL 01  |
| 4.73                | 0.42  |     | ITNA   | 81WAN 01  | 1.5              | 0.1   |     | NAA    | 77JER 01  |
| 4.75                | 0.08  | D   | TCGS   | 80AND 01  | 1.5              | 0.1   | D   | PAA    | 77CHA 01  |
| 4.75                | 0.08  |     | TCGS   | 79FAI 01  | 1.5              | 0.1   |     | PAA    | 76CHA 01  |
| 4.8                 |       |     | ICPES  | 80NAD 01  | 1.5              | 0.15  |     | FAA    | 74RAI 01  |
| 4.8                 | 0.96  |     | OES    | 76WEW 01  | 1.5              | 0.5   |     | ICPES  | 81CHU 01  |
| 4.81                |       |     | ICPES  | 84CLE 01  | 1.52             | 0.07  |     | PAA    | 74CHA 01  |
| 4.9                 | 0.2   |     | AA     | 80STO 02  | 1.52             | 0.08  |     | AF     | 75EPS 01  |
| 4.9                 | 0.2   |     | TCGS   | 79AND 01  | 1.53             |       |     | AA     | 76WEW 01  |
| 5                   | 1.1   |     | ITNA   | 76OND 01  | 1.55             |       |     | FAA    | 79SIL 01  |
| 5.04                |       |     | XRF    | 78CAM 02  | 1.6              | 0.15  | 7   | AE+AF  | 73TAL 01  |
| 5.09                | 0.56  |     | 14NAA  | 77VAN 01  | 1.6              | 0.15  |     | FAE    | 74TAL 01  |
| 5.1                 | 0.03  |     | PAA    | 76KAT 02  | 1.6              | 0.2   | 6   | TCGS   | 76GLA 01  |
| 5.1                 | 0.05  |     | PAA    | 76KAT 03  | 1.6              | 0.5   |     | ICPES  | 80EPS 03  |
| 5.1                 | 0.6   |     | ITNA   | 76WEW 01  | 1.63             | 0.07  | 8   | SSMS   | 80KOP 01  |
| 5.11                | 0.13  |     | XRF    | 79SMI 01  | 1.69             |       |     | AA     | 78GEL 01  |
| 5.21                | 0.2   |     | ICPES  | 84NAD 01  | 1.7              | 0.2   |     | AA     | 76OND 01  |
| 5.3                 | 0.1   |     | EXRF   | 77NIE 01  | 1.85             |       |     | IDMS   | 75KLE 01  |
| 5.3                 | 0.5   |     | PAA    | 75OND 01  | 2.2              | 0.6   | 13  | ICPES  | 84BOT 01  |
|                     |       |     |        |           | 9.5              |       | 13  | ICPES  | 84BOT 01  |
|                     |       |     |        |           | 15               |       |     | UU     | 80HEN 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ce (ug/g)</u> |       |     |        |           | <u>Cl (ug/g)</u> |       |     |        |           |
| 125              |       |     | UU     | 80HEN 01  | 19.6             | 0.1   |     | PAA    | 74CHA 01  |
| 129              | 10    |     | ITNA   | 73SHE 01  | 20               | 2     |     | ITNA   | 78NAD 02  |
| 136              | 5     |     | 14NAA  | 81WIL 01  | 20               | 2     |     | ITNA   | 75NAD 02  |
| 136              | 8     |     | 14NAA  | 81WIL 02  | 25               | 7     |     | PAA    | 76CHA 01  |
| 140              |       |     | ICPES  | 80FLO 01  | 25               | 7     | D   | PAA    | 77CHA 01  |
| 140              | 10    | D   | ITNA   | 78RYA 01  | 32               | 10    |     | ITNA   | 77CHA 01  |
| 140              | 10    |     | ITNA   | 77CHA 01  | 32               | 10    | D   | ITNA   | 78RYA 01  |
| 141              | 7     |     | ITNA   | 81WAN 01  | 40               | 8     |     | ITNA   | 78MAC 01  |
| 145              | 5     |     | ITNA   | 78LAU 02  | 40.6             | 14.4  |     | ITNA   | 83LI 01   |
| 145              | 6     |     | ITNA   | 76WEW 01  | 42               |       |     | SSMS   | 83WEI 02  |
| 146              |       |     | ITNA   | 82GLA 02  | 42               |       |     | ITNA   | 78WEA 01  |
| 146              | 15    |     | ITNA   | 75OND 01  | 42               | 10    |     | ITNA   | 75OND 01  |
| 146              | 17    |     | ITNA   | 76OND 01  | 50               |       |     | UU     | 80HEN 01  |
| 148              | 6     |     | ITNA   | 76RAG 01  | 52               | 15    |     | ITNA   | 81WAN 01  |
| 148              | 7     | 35  | ITNA   | 81GLA 02  | 56               |       | 35  | ITNA   | 81GLA 03  |
| 149              | 4     |     | XRF    | 79SMI 01  | 58               | 9     |     | ITNA   | 77MAE 01  |
| 149              | 7     | 35  | NAA    | 81GLA 04  | 185              | 44    |     | ITNA   | 73SHE 01  |
| 149.6            | 2     |     | ITNA   | 77ROW 03  |                  |       |     |        |           |
| 149.6            | 2     | D   | ITNA   | 77ROW 04  |                  |       |     |        |           |
| 150              | 2     | D   | NAA    | 79STE 01  |                  |       |     |        |           |
| 150.6            | 3.3   |     | IENA   | 77ROW 04  |                  |       |     |        |           |
| 152              | 10    | D   | PAA    | 77CHA 01  | 25               | 3     |     | ICPES  | 84NAD 01  |
| 152              | 10    |     | PAA    | 76CHA 01  | 26               |       |     | ICPES  | 80NAD 01  |
| 152              | 15    |     | ITNA   | 85FIL 01  | 32               | 1     |     | ICPES  | 84BOT 01  |
| 153              | 1     |     | PAA    | 76KAT 02  | 32               | 2     |     | AA     | 77MIT 01  |
| 153              | 2     |     | PAA    | 76KAT 03  | 35               | 2     |     | ITNA   | 76KUC 01  |
| 153              | 3     | 35  | ITNA   | 81GLA 03  | 35.4             | 2.8   |     | PAA    | 74CHA 01  |
| 153              | 4     |     | ITNA   | 84ODD 01  | 36.2             | 1.1   |     | ITNA   | 76BLO 01  |
| 153              | 6     |     | RTNA   | 84ODD 01  | 36.7             | 3.9   |     | ITNA   | 75NAD 02  |
| 154              |       |     | XRF    | 78CAM 02  | 37               | 4     |     | ITNA   | 78NAD 02  |
| 154              | 8     | 35  | IENA   | 80GLA 03  | 38               |       |     | ITNA   | 78WEA 01  |
| 157              | 3.2   |     | ICPES  | 81CHU 01  | 38               | 0.96  |     | SSMS   | 83WEI 02  |
| 160              | 23    |     | EXRF   | 77GIA 01  | 38               | 1     |     | OES    | 76WEW 01  |
| 161              | 35    |     | ITNA   | 78NAD 02  | 38               | 1     |     | ITNA   | 85FIL 01  |
| 161              | 35    |     | ITNA   | 75NAD 02  | 38               | 2     | 35  | IENA   | 80GLA 03  |
| 169              |       |     | ITNA   | 75MIL 01  | 38               | 2     |     | ITNA   | 78MAC 01  |
| 176              | 4     |     | ITNA   | 78MAC 01  | 38.6             | 3.7   |     | ITNA   | 73SHE 01  |
| 200              | 100   |     | OES    | 76WEW 01  | 39               |       |     | AA     | 76WEW 01  |
| 210              |       |     | SSMS   | 83WEI 02  | 39               | 2     |     | ICPES  | 85HAR 01  |
| 210              | 34    |     | SSMS   | 78SUG 02  | 39.4             | 1.2   |     | ITNA   | 76RAG 01  |
|                  |       |     |        |           | 39.8             | 0.9   |     | ITNA   | 81WAN 01  |
|                  |       |     |        |           | 40               | 2     | 35  | NAA    | 81GLA 04  |
|                  |       |     |        |           | 40               | 2     |     | PAA    | 76CHA 01  |
|                  |       |     |        |           | 40               | 2     |     | ITNA   | 76OND 01  |
|                  |       |     |        |           | 40               | 2     |     | ITNA   | 73ABE 01  |
|                  |       |     |        |           | 40               | 2     | D   | PAA    | 77CHA 01  |
|                  |       |     |        |           | 40               | 4     |     | FAA    | 76OWE 01  |
|                  |       |     |        |           | 40.1             | 0.6   |     | ITNA   | 84GLA 02  |
|                  |       |     |        |           | 40.3             | 0.4   |     | ITNA   | 77ROW 03  |
|                  |       |     |        |           | 40.3             | 0.4   | D   | NAA    | 79STE 01  |
|                  |       |     |        |           | 40.3             | 0.4   | D   | ITNA   | 77ROW 04  |
|                  |       |     |        |           | 41               |       |     | ICPES  | 80FLO 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Co (ug/g) cont.</u> |       |     |        |           | <u>Cr (ug/g) cont.</u> |       |     |        |           |
| 41                     | 0.6   |     | IENA   | 77ROW 04  | 128                    | 5     | 35  | ITNA   | 81GLA 02  |
| 41                     | 1     |     | ITNA   | 78LAU 02  | 128                    | 5     | 35  | ITNA   | 81GLA 04  |
| 41                     | 1     | 35  | ITNA   | 81GLA 02  | 128.5                  | 8.5   |     | AA     | 77MIT 01  |
| 41                     | 1.2   |     | ICPES  | 81CHU 01  | 129                    | 3     | D   | NAA    | 79STE 01  |
| 41                     | 2     | 35  | ITNA   | 81GLA 03  | 129                    | 3.9   |     | ICPES  | 81CHU 01  |
| 41                     | 3     |     | ITNA   | 76WEW 01  | 129.2                  | 2.7   |     | ITNA   | 77ROW 03  |
| 41.5                   | 1.2   |     | ITNA   | 75OND 01  | 129.2                  | 2.7   | D   | ITNA   | 77ROW 04  |
| 42                     |       |     | FAA    | 79SIL 01  | 130                    |       |     | AA     | 76WEW 01  |
| 42                     |       |     | ITNA   | 75MIL 01  | 130                    |       |     | SSMS   | 83WEI 02  |
| 42                     | 1.6   |     | ITNA   | 77CHA 01  | 130                    |       |     | UU     | 80HEN 01  |
| 42                     | 1.6   | D   | ITNA   | 78RYA 01  | 130                    | 4     |     | ITNA   | 84GLA 02  |
| 42                     | 3     |     | PAA    | 76KAT 02  | 130                    | 5     | 9   | ITNA   | 78LAU 02  |
| 42                     | 5     |     | PAA    | 76KAT 03  | 131                    |       |     | EXRF   | 78WEG 01  |
| 42                     | 6     |     | AA     | 76OND 01  | 131                    | 6     |     | PAA    | 76CHA 01  |
| 45                     | 16    |     | 14NAA  | 81WIL 01  | 131                    | 6     | D   | PAA    | 77CHA 01  |
| 45                     | 16    |     | 14NAA  | 81WIL 02  | 131                    | 6.1   |     | PAA    | 74CHA 01  |
| 46                     |       |     | ITNA   | 75KLE 01  | 131                    | 8     |     | ITNA   | 73ABE 01  |
| 46                     | 10    |     | AA     | 82HAR 01  | 131                    | 8     |     | EXRF   | 78PEL 01  |
| 48                     |       |     | ITNA   | 84CLE 01  | 131                    | 9     |     | ITNA   | 76KUC 01  |
| 50                     |       |     | UU     | 80HEN 01  | 131.7                  | 4.6   |     | RTNA   | 81GAL 01  |
| 54                     |       |     | ICPES  | 84CLE 01  | 131.7                  | 4.6   | D   | RTNA   | 81GAL 02  |
|                        |       |     |        |           | 132                    | 3.3   |     | AA     | 74RAI 01  |
|                        |       |     |        |           | 132                    | 10    |     | FAA    | 76OWE 01  |
|                        |       |     |        |           | 132.3                  | 0.35  |     | RTNA   | 74MCC 01  |
|                        |       |     |        |           | 134                    | 9     | 35  | ITNA   | 81GLA 03  |
|                        |       |     |        |           | 135                    |       |     | ITNA   | 84CLE 01  |
|                        |       |     |        |           | 135                    |       |     | AA     | 78GUI 01  |
|                        |       |     |        |           | 135                    |       |     | AA     | 78WEG 01  |
|                        |       |     |        |           | 135                    | 6     | D   | ITNA   | 78RYA 01  |
|                        |       |     |        |           | 135                    | 6     |     | ITNA   | 77CHA 01  |
|                        | 1.5   |     | ITNA   | 75NAD 02  | 135                    | 14    |     | IENA   | 77ROW 04  |
|                        | 2     |     | ITNA   | 78NAD 02  | 137                    | 16    |     | ITNA   | 81WAN 01  |
|                        |       |     | ICPES  | 80NAD 01  | 138                    |       |     | ITNA   | 75KLE 01  |
|                        |       | 6   | SSMS   | 78GUI 01  | 140                    | 15    |     | ITNA   | 78LAU 02  |
|                        | 7     |     | ITNA   | 76RAG 01  | 142                    | 9     |     | PAA    | 76KAT 02  |
|                        | 6     |     | ITNA   | 76OND 01  | 142                    | 13    |     | PAA    | 76KAT 03  |
|                        | 8     |     | ITNA   | 76WEW 01  | 150                    | 13    |     | OES    | 76WEW 01  |
|                        |       |     | OES    | 78SUG 01  | 159                    | 115   |     | EXRF   | 77GIA 01  |
|                        | 4     |     | AA     | 76OND 01  | 175                    |       | 6   | SSMS   | 78GUI 01  |
|                        | 5     |     | ITNA   | 78MAC 01  | 180                    |       |     | ITNA   | 75MIL 01  |
|                        | 6     |     | ICPES  | 85HAR 01  | 181                    |       |     | FAA    | 75POL 01  |
|                        | 12    |     | ITNA   | 73SHE 01  |                        |       |     |        |           |
|                        |       |     | ICPES  | 80FLO 01  |                        |       |     |        |           |
|                        | 9     |     | ITNA   | 85FIL 01  |                        |       |     |        |           |
|                        | 14    |     | XRF    | 79SMI 01  |                        |       |     |        |           |
|                        | 9     |     | ICPES  | 84BOT 01  |                        |       |     |        |           |
|                        | 11    |     | ITNA   | 76BLO 01  |                        |       |     |        |           |
|                        | 6     | D   | NAA    | 74OND 01  |                        |       |     |        |           |
|                        | 6     |     | ITNA   | 75OND 01  |                        |       |     |        |           |
|                        |       |     | ITNA   | 78WEA 01  |                        |       |     |        |           |
|                        |       |     | AA     | 79SIL 01  |                        |       |     |        |           |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cs (ug/g)</u> |       |     |        |           | <u>Cu (ug/g) cont.</u> |       |     |        |           |
| 0.63             | 0.06  |     | PAA    | 74CHA 01  | 125                    | 10    |     | ITNA   | 77CHA 01  |
| 5.8              | 1.4   |     | ITNA   | 78NAD 02  | 125                    | 13    |     | EXRF   | 78PEL 01  |
| 5.81             | 1.4   |     | ITNA   | 75NAD 02  | 126                    | 2     |     | AA     | 82HAR 01  |
| 7.3              | 1     |     | ITNA   | 78LAU 02  | 127                    |       |     | AA     | 78GEL 01  |
| 7.7              | 1.3   |     | ITNA   | 76WEW 01  | 128                    | 3.9   |     | ICPES  | 81CHU 01  |
| 8                | 1     |     | PAA    | 76CHA 01  | 128                    | 6     |     | ICPES  | 84BOT 01  |
| 8                | 1     | D   | PAA    | 77CHA 01  | 129                    |       |     | AA     | 76WEW 01  |
| 8.1              | 0.5   | 9   | ITNA   | 78LAU 02  | 129                    |       |     | AA     | 78WEG 01  |
| 8.2              | 0.4   |     | ITNA   | 84GLA 02  | 129                    | 4     |     | ICPES  | 85HAR 01  |
| 8.2              | 0.5   |     | ITNA   | 76OND 01  | 129                    | 5     | 8   | SSMS   | 80KOP 01  |
| 8.2              | 0.9   |     | IENA   | 76STE 05  | 130                    | 2.2   |     | AA     | 74RAI 01  |
| 8.3              | 0.4   | 35  | ITNA   | 81GLA 02  | 130                    | 5     |     | AA     | 80STO 02  |
| 8.3              | 0.7   |     | ITNA   | 85FIL 01  | 131                    |       | 6   | SSMS   | 78GUI 01  |
| 8.3              | 0.9   |     | IENA   | 77ROW 03  | 131                    |       |     | FAA    | 78GUI 01  |
| 8.3              | 1     | D   | ITNA   | 78RYA 01  | 131                    |       |     | AE+AF  | 77FEL 01  |
| 8.3              | 1     |     | ITNA   | 77CHA 01  | 132                    |       |     | ICPES  | 84CLE 01  |
| 8.4              | 0.2   | D   | NAA    | 79STE 01  | 133                    |       |     | XRF    | 75KLE 01  |
| 8.4              | 0.5   |     | ITNA   | 77ROW 04  | 133                    | 4     |     | EXRF   | 77GIA 01  |
| 8.42             | 0.22  |     | IENA   | 77ROW 04  | 134                    | 11    | 6   | PAA    | 82SEG 01  |
| 8.5              | 0.5   |     | ITNA   | 78MAC 01  | 135                    | 3     |     | XRF    | 79SMI 01  |
| 8.6              |       |     | ITNA   | 78WEA 01  | 136                    |       |     | ICPES  | 80NAD 01  |
| 8.6              |       |     | SSMS   | 83WEI 02  | 136                    | 6     | 35  | RTNA   | 77GLA 01  |
| 8.6              | 0.8   |     | ITNA   | 76RAG 01  | 137                    | 7     |     | ITNA   | 76BLO 01  |
| 8.6              | 1.1   |     | ITNA   | 75OND 01  | 140                    | 10    |     | XRF    | 81COH 02  |
| 8.7              | 0.3   | 35  | IENA   | 80GLA 03  | 140                    | 20    | 6   | PAA    | 82SEG 01  |
| 8.7              | 0.7   | 35  | NAA    | 81GLA 04  | 140                    | 20    |     | PAA    | 80SEG 01  |
| 8.8              | 0.4   | 35  | ITNA   | 81GLA 03  | 142                    | 9     |     | ITNA   | 73SHE 01  |
| 8.9              | 0.8   |     | ITNA   | 81WAN 01  | 142                    | 37    |     | ICPES  | 84NAD 01  |
| 9.4              |       |     | ITNA   | 75MIL 01  | 145                    |       | 6   | SSMS   | 78GUI 01  |
| 9.9              | 0.8   |     | ITNA   | 73ABE 01  | 198                    | 61    |     | ITNA   | 81WAN 01  |
| 10               |       |     | UU     | 80HEN 01  |                        |       |     |        |           |
| 10               | 1     |     | 14NAA  | 81WIL 02  |                        |       |     |        |           |
| 13.8             | 1.4   |     | ITNA   | 73SHE 01  |                        |       |     |        |           |
| <u>Cu (ug/g)</u> |       |     |        |           | <u>Dy (ug/g)</u>       |       |     |        |           |
| 70.2             | 1.8   |     | AA     | 77MIT 01  | 7.6                    | 2.4   |     | ITNA   | 73SHE 01  |
| 110              | 11    |     | OES    | 76WEW 01  | 9                      | 0.1   |     | RTNA   | 84ODD 01  |
| 115              | 8     |     | ITNA   | 77ROW 03  | 9                      | 2     |     | ITNA   | 78MAC 01  |
| 115              | 8     |     | ITNA   | 76STE 05  | 9.1                    | 0.1   |     | ITNA   | 84ODD 01  |
| 115              | 8     | D   | NAA    | 79STE 01  | 9.4                    | 0.5   |     | ITNA   | 76STE 05  |
| 119              | 5     |     | AA     | 76OND 01  | 9.4                    | 0.5   | D   | NAA    | 79STE 01  |
| 120              |       |     | ICPES  | 80FLO 01  | 10.2                   |       |     | ITNA   | 75MIL 01  |
| 120              |       |     | UU     | 80HEN 01  | 10.2                   |       | 35  | ITNA   | 81GLA 04  |
| 121              |       |     | AA     | 79SIL 01  | 10.3                   | 0.4   | 35  | ITNA   | 81GLA 02  |
| 123              |       |     | EXRF   | 78WEG 01  | 10.9                   |       |     | ITNA   | 78NAD 02  |
| 124              |       |     | XRF    | 78CAM 02  | 10.9                   |       |     | ITNA   | 75NAD 02  |
| 124              |       |     | ICPES  | 84SOB 01  | 12                     |       |     | SSMS   | 83WEI 02  |
| 124              | 19    |     | FAA    | 76OWE 01  | 12.1                   | 0.6   |     | ITNA   | 76OND 01  |
| 125              |       |     | AA     | 78GUI 01  | 19                     | 3     |     | SSMS   | 78SUG 02  |
| 125              | 10    | D   | ITNA   | 78RYA 01  |                        |       |     |        |           |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc          | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|---------------|-------|-----|--------|-----------|
| <u>Er (ug/g)</u> |       |     |        |           | <u>Fe (%)</u> |       |     |        |           |
| <                | 100   | L   | OES    | 76WEW 01  | 4.23          | 0.3   |     | PAA    | 76KAT 03  |
| <                | 300   | L   | OES    | 76WEW 01  | 4.24          | 0.19  |     | PAA    | 76KAT 02  |
| 2.1              |       |     | SSMS   | 83WEI 02  | 4.4           |       |     | AA     | 78GUI 01  |
| 11               | 2     |     | SSMS   | 78SUG 02  | 5.278         | 0.56  |     | ITNA   | 73SHE 01  |
| 89               | 3     |     | RTNA   | 84ODD 01  | 5.53          | 0.12  |     | ICPES  | 84NAD 01  |
|                  |       |     |        |           | 5.6           | 0.2   |     | ITNA   | 76WEW 01  |
|                  |       |     |        |           | 5.6           | 2.8   |     | OES    | 76WEW 01  |
|                  |       |     |        |           | 5.7           | 0.3   |     | ITNA   | 76KUC 01  |
| 1.9              | 0.2   |     | ITNA   | 76OND 01  | 5.8           |       |     | OES    | 78SUG 01  |
| 2                |       |     | ICPES  | 80FLO 01  | 5.8           |       |     | AA     | 78WEG 01  |
| 2                | 2     | 35  | IENA   | 80GLA 03  | 5.8           |       |     | ITNA   | 84CLE 01  |
| 2.3              | 0.1   |     | ITNA   | 73ABE 01  | 5.8           | 0.3   | 5   | IENA   | 80GLA 03  |
| 2.39             | 0.11  |     | ITNA   | 76RAG 01  | 5.9           | 0.2   | 5   | IENA   | 80GLA 03  |
| 2.42             | 0.16  |     | ITNA   | 73SHE 01  | 5.91          | 0.16  |     | IENA   | 77ROW 04  |
| 2.44             | 0.19  |     | ITNA   | 76STE 05  | 5.93          | 0.04  |     | ICPES  | 85HAR 01  |
| 2.49             | 0.15  | 35  | ITNA   | 81GLA 02  | 5.94          |       |     | XRF    | 78CAM 02  |
| 2.5              |       |     | ITNA   | 78WEA 01  | 5.96          | 0.16  |     | XRF    | 79SMI 01  |
| 2.5              | 0.16  | 35  | ITNA   | 81GLA 04  | 6             |       |     | XRF    | 76WEW 01  |
| 2.5              | 0.4   |     | ITNA   | 75OND 01  | 6             |       |     | ICPES  | 80FLO 01  |
| 2.56             | 0.07  |     | ITNA   | 84GLA 02  | 6             | 0.2   |     | ICPES  | 80EPS 03  |
| 2.57             | 0.19  |     | ITNA   | 77ROW 03  | 6             | 0.3   |     | ITNA   | 76OND 01  |
| 2.6              | 0.2   |     | ITNA   | 76WEW 01  | 6             | 0.4   |     | AA     | 79WEG 01  |
| 2.6              | 0.2   |     | ITNA   | 85FIL 01  | 6.03          | 0.16  |     | ITNA   | 81WAN 01  |
| 2.6              | 0.2   |     | ITNA   | 81WAN 01  | 6.08          | 0.52  |     | PAA    | 74CHA 01  |
| 2.62             | 0.05  |     | ITNA   | 75NAD 02  | 6.09          | 0.03  |     | ITNA   | 84GLA 02  |
| 2.62             | 0.05  |     | ITNA   | 78NAD 02  | 6.1           | 0.1   |     | TCGS   | 79FAI 01  |
| 2.69             | 0.09  |     | ITNA   | 77ROW 04  | 6.1           | 0.1   | D   | TCGS   | 80AND 01  |
| 2.69             | 0.09  | D   | NAA    | 79STE 01  | 6.1           | 0.2   | D   | PAA    | 77CHA 01  |
| 2.7              | 0.1   |     | ITNA   | 78LAU 02  | 6.1           | 0.2   |     | PAA    | 76CHA 01  |
| 2.72             | 0.07  |     | ITNA   | 84ODD 01  | 6.1           | 0.3   | 35  | NAA    | 81GLA 04  |
| 2.79             |       |     | ITNA   | 82GLA 02  | 6.14          | 0.07  |     | ICPES  | 84BOT 01  |
| 2.8              | 0.13  |     | OES    | 76WEW 01  | 6.16          | 0.3   |     | EXRF   | 78PEL 01  |
| 2.8              | 0.3   |     | RTNA   | 84ODD 01  | 6.17          | 0.41  |     | ITNA   | 78NAD 02  |
| 2.86             |       |     | ITNA   | 75KLE 01  | 6.17          | 0.41  |     | ITNA   | 75NAD 02  |
| 2.9              | 0.2   | 35  | ITNA   | 81GLA 03  | 6.2           |       |     | EXRF   | 78WEG 01  |
| 3                | 0.15  |     | ICPES  | 81CHU 01  | 6.2           |       |     | OES    | 80WAL 01  |
| 3.1              |       |     | ITNA   | 75MIL 01  | 6.2           | 0.04  |     | ICPES  | 80NAD 01  |
| 5                |       |     | SSMS   | 83WEI 02  | 6.2           | 0.05  |     | ITNA   | 77ROW 03  |
| 5.3              | 1.2   |     | SSMS   | 78SUG 02  | 6.2           | 0.05  | D   | ITNA   | 77ROW 04  |
|                  |       |     |        |           | 6.2           | 0.05  | D   | NAA    | 79STE 01  |
|                  |       |     |        |           | 6.2           | 0.1   |     | EXRF   | 77NIE 01  |
|                  |       |     |        |           | 6.2           | 0.1   |     | AA     | 76OND 01  |
| 10               |       |     | UU     | 80HEN 01  | 6.2           | 0.1   |     | AA     | 77MIT 01  |
| 20               |       |     | AA     | 76WEW 01  | 6.2           | 0.2   |     | FAF    | 80EPS 04  |
| 20               | 2     |     | ISE    | 83BET 02  | 6.2           | 0.3   | D   | NAA    | 74OND 01  |
|                  |       |     |        |           | 6.2           | 0.3   |     | ITNA   | 75OND 01  |
|                  |       |     |        |           | 6.2           | 0.4   | D   | ITNA   | 78RYA 01  |
|                  |       |     |        |           | 6.2           | 0.4   |     | ITNA   | 77CHA 01  |
|                  |       |     |        |           | 6.2           | 0.6   |     | XRF    | 81COH 02  |
|                  |       |     |        |           | 6.22          | 0.08  |     | TCGS   | 79AND 01  |
|                  |       |     |        |           | 6.22          | 0.48  |     | EXRF   | 77GIA 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                | Uncer | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|---------------------|-------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Fe (%) cont.</u> |       |     |        |           | <u>Gd (ug/g)</u>    |       |     |        |           |
| 6.23                | 0.1   |     | ITNA   | 78LAU 02  | 1.9                 |       |     | SSMS   | 83WEI 02  |
| 6.23                | 0.14  | 35  | ITNA   | 81GLA 02  | 11                  |       |     | ITNA   | 75MIL 01  |
| 6.3                 | 0.1   |     | ITNA   | 78MAC 01  | 11.4                | 0.2   |     | TCGS   | 79FAI 01  |
| 6.3                 | 0.15  |     | AA     | 82HAR 01  | 11.6                | 0.1   |     | RTNA   | 84ODD 01  |
| 6.3                 | 0.4   | 35  | ITNA   | 81GLA 03  | 11.7                | 0.4   |     | TCGS   | 79AND 01  |
| 6.32                |       |     | ICPES  | 80NAD 01  | 11.9                | 0.2   |     | ITNA   | 84ODD 01  |
| 6.35                |       |     | ITNA   | 78WEA 01  | 12.1                | 0.36  |     | ICPES  | 81CHU 01  |
| 6.35                | 0.12  |     | ITNA   | 85FIL 01  | 17.5                | 0.3   |     | TCGS   | 80AND 01  |
| 6.37                |       |     | ITNA   | 75KLE 01  | 23                  | 4     |     | SSMS   | 78SUG 02  |
| 6.4                 |       |     | AA     | 79SIL 01  |                     |       |     |        |           |
| 6.4                 | 0.15  |     | 14NAA  | 81WIL 02  | <u>Ge (ug/g)</u>    |       |     |        |           |
| 6.46                |       |     | ICPES  | 84CLE 01  | 19                  | 1     |     | XRF    | 79SMI 01  |
| 6.46                | 0.14  |     | ICPES  | 81CHU 01  | 20                  |       |     | UU     | 80HEN 01  |
| 6.5                 |       |     | UU     | 80HEN 01  | 24                  |       |     | UU     | 78SIM 01  |
| 6.51                | 0.31  |     | ITNA   | 73ABE 01  | 25                  | 1.4   |     | OES    | 76WEW 01  |
| 6.69                |       |     | ITNA   | 75MIL 01  | 25.9                | 0.7   |     | COLOR  | 84SHI 01  |
| 6.7                 |       | 35  | TCGS   | 78GLA 04  | 26                  | 5     |     | EXRF   | 77GIA 01  |
| 6.8                 | 0.03  |     | ITNA   | 76RAG 01  | 26.8                | 2.6   |     | ICPES  | 84NAD 02  |
| 6.8                 | 0.2   |     | AA     | 80STO 02  | 36                  |       |     | SSMS   | 83WEI 02  |
| 6.95                | 0.15  |     | 14NAA  | 81WIL 01  | 131                 |       |     | FAA    | 75POL 01  |
| 7                   |       |     | AA     | 76WEW 01  | 476                 | 166   |     | ITNA   | 73SHE 01  |
| <u>Ga (ug/g)</u>    |       |     |        |           | <u>H (ug/g)</u>     |       |     |        |           |
| 34.3                | 1.9   |     | ITNA   | 81WAN 01  | 1000                |       |     | UU     | 80HEN 01  |
| 37                  | 2     |     | IENA   | 78WAN 01  | 1200                | 400   |     | TCGS   | 79AND 01  |
| 38.3                | 6.3   |     | ITNA   | 73SHE 01  | <u>H2O- (%)</u>     |       |     |        |           |
| 40                  | 1     |     | XRF    | 79SMI 01  | 0.03                |       |     | UU     | 80HEN 01  |
| 40.3                | 2     | 5   | IENA   | 76STE 05  | <u>H2O-T (%)</u>    |       |     |        |           |
| 40.7                | 1.2   | D   | NAA    | 79STE 01  | 0.17                |       |     | FD     | 80KHA 02  |
| 40.7                | 1.2   |     | IENA   | 77ROW 03  | <u>H2SO4 (ug/g)</u> |       |     |        |           |
| 40.7                | 1.2   | 5   | IENA   | 76STE 05  | < 1000              |       | L   | UU     | 80HEN 01  |
| 41                  | 1     | 35  | IENA   | 81GLA 04  | <u>Hf (ug/g)</u>    |       |     |        |           |
| 41                  | 7     |     | EXRF   | 77GIA 01  | 4                   |       |     | SSMS   | 83WEI 02  |
| 43                  | 1     | 35  | IENA   | 80GLA 03  | 6.5                 | 0.7   |     | ITNA   | 76WEW 01  |
| 43                  | 1     | 35  | IENA   | 81GLA 03  | 6.7                 | 0.3   |     | IENA   | 77ROW 03  |
| 45                  | 7     |     | ITNA   | 76OND 01  | 6.7                 | 0.3   | D   | IENA   | 77ROW 04  |
| 45                  | 8     |     | ITNA   | 85FIL 01  | 6.7                 | 0.3   | D   | NAA    | 79STE 01  |
| 48                  | 6     |     | COLOR  | 79LIK 01  | 7                   | 0.4   |     | ITNA   | 77ROW 04  |
| 49                  |       |     | XRF    | 75KLE 01  | 7.2                 | 0.6   |     | ITNA   | 76RAG 01  |
| 50                  |       |     | UU     | 80HEN 01  | 7.4                 | 0.5   |     | ITNA   | 78LAU 02  |
| 58                  | 10    |     | FAA    | 76OWE 01  | 7.5                 |       |     | ITNA   | 78NAD 02  |
| 68                  | 14    |     | OES    | 76WEW 01  |                     |       |     |        |           |
| 72                  |       |     | ICPES  | 80FLO 01  |                     |       |     |        |           |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Hf (ug/g) cont.</u> |       |     |        |           | <u>Ho (ug/g)</u> |       |     |        |           |
| 7.5                    | 0.4   |     | ITNA   | 78MAC 01  | 0.82             |       |     | SSMS   | 83WEI 02  |
| 7.5                    | 0.4   |     | ITNA   | 85FIL 01  | 1.94             | 0.13  |     | IENA   | 77ROW 03  |
| 7.5                    | 0.5   |     | ITNA   | 77CHA 01  | 1.94             | 0.13  | D   | NAA    | 79STE 01  |
| 7.5                    | 0.5   | D   | ITNA   | 78RYA 01  | 1.94             | 0.13  |     | IENA   | 76STE 05  |
| 7.52                   | 0.02  |     | ITNA   | 75NAD 02  | 1.98             | 0.01  |     | RTNA   | 84ODD 01  |
| 7.6                    | 0.2   |     | ITNA   | 84GLA 02  | 1.99             | 0.07  |     | ITNA   | 84ODD 01  |
| 7.62                   | 0.56  |     | ITNA   | 73SHE 01  | 3.6              | 0.8   |     | SSMS   | 78SUG 02  |
| 7.7                    | 0.1   |     | ITNA   | 81WAN 01  |                  |       |     |        |           |
| 7.9                    |       |     | ITNA   | 78WEA 01  |                  |       |     |        |           |
| 7.9                    | 0.4   |     | ITNA   | 75OND 01  |                  |       |     |        |           |
| 8                      | 0.4   | 35  | ITNA   | 81GLA 02  | <                | 0.5   | L   | UU     | 80HEN 01  |
| 8                      | 0.4   | 35  | NAA    | 81GLA 04  | <                | 6     | L   | EXRF   | 77GIA 01  |
| 8.1                    | 0.1   | 35  | IENA   | 80GLA 03  | 2                | 1.2   |     | ITNA   | 77MAE 01  |
| 8.2                    |       |     | ITNA   | 75MIL 01  | 2.8              | 1     |     | PAA    | 77CHA 01  |
| 8.2                    | 0.8   |     | ITNA   | 73ABE 01  | 2.9              |       |     | ITNA   | 78WEA 01  |
| 8.2                    | 0.8   |     | ITNA   | 76OND 01  | 2.9              | 1.2   |     | PAA    | 75OND 01  |
| 10                     |       |     | UU     | 80HEN 01  | 3                | 1     |     | ITNA   | 77CHA 01  |
| 10                     | 2     | 35  | ITNA   | 81GLA 03  | 3                | 1     | D   | ITNA   | 78RYA 01  |
| 10.8                   |       |     | ITNA   | 75KLE 01  | 3.4              |       |     | SSMS   | 83WEI 02  |
| <u>Hg (ng/g)</u>       |       |     |        |           | <u>In (ng/g)</u> |       |     |        |           |
| 100                    |       |     | UU     | 80HEN 01  | 118              | 4     | 5   | IENA   | 76STE 05  |
| 119                    | 2     |     | CVAA   | 80NAD 01  | 128              | 8     | 5   | IENA   | 76STE 05  |
| 120                    | 15    |     | CVAA   | 82SUL 01  | 128              | 8     | D   | NAA    | 79STE 01  |
| 127                    | 3     |     | CVAA   | 75KLE 01  | 128              | 8     |     | IENA   | 77ROW 03  |
| 130                    | 30    |     | PAA    | 76CHA 01  | 156              | 35    |     | ITNA   | 73SHE 01  |
| 130                    | 30    |     | NAA    | 77JER 01  | 160              | 20    |     | ITNA   | 81WAN 01  |
| 130                    | 30    | D   | PAA    | 77CHA 01  | 270              | 140   |     | ITNA   | 76RAG 01  |
| 134                    | 4     |     | CVAA   | 74RAI 01  | 280              | 30    |     | PAA    | 74CHA 01  |
| 135                    | 10    |     | PAA    | 74CHA 01  | 290              | 60    |     | PAA    | 76CHA 01  |
| 137                    | 15    | D   | RTNA   | 81GAL 02  | 290              | 60    | D   | PAA    | 77CHA 01  |
| 137                    | 15    |     | RTNA   | 81GAL 01  | 320              | 80    | D   | ITNA   | 78RYA 01  |
| 141                    | 12    |     | FAA    | 77GLA 03  | 320              | 80    |     | ITNA   | 77CHA 01  |
| 145                    |       |     | ITNA   | 78WEA 01  | 320              | 100   |     | ITNA   | 75OND 01  |
| 145                    | 6     |     | RTNA   | 74ORV 01  | 3000             | 2000  |     | EXRF   | 77GIA 01  |
| 145                    | 6     |     | RTNA   | 84DEL 01  |                  |       |     |        |           |
| 160                    | 40    |     | ITNA   | 77CHA 01  |                  |       |     |        |           |
| 160                    | 40    | D   | ITNA   | 78RYA 01  |                  |       |     |        |           |
| 170                    | 20    | 6   | PAA    | 82SEG 01  | <                | 200   | L   | UU     | 80HEN 01  |
| 200                    | 20    |     | PAA    | 80SEG 01  | 15.6             | 2.4   |     | RTNA   | 77NAD 02  |
| 200                    | 100   | 6   | PAA    | 82SEG 01  | 18.6             |       |     | ITNA   | 78WEA 01  |
| 550                    |       |     | XRF    | 76WEW 01  | 18.6             | 3.3   |     | ITNA   | 73SHE 01  |
| 3700                   | 1100  |     | ITNA   | 73SHE 01  | 250              | 80    |     | ITNA   | 77CHA 01  |
| 11000                  |       |     | XRF    | 78CAM 02  | 250              | 80    | D   | ITNA   | 78RYA 01  |
| <u>Ir (ng/g)</u>       |       |     |        |           | <u>Ir (ng/g)</u> |       |     |        |           |
|                        |       |     |        |           | <                | 200   | L   | UU     | 80HEN 01  |
|                        |       |     |        |           | 15.6             | 2.4   |     | RTNA   | 77NAD 02  |
|                        |       |     |        |           | 18.6             |       |     | ITNA   | 78WEA 01  |
|                        |       |     |        |           | 18.6             | 3.3   |     | ITNA   | 73SHE 01  |
|                        |       |     |        |           | 250              | 80    |     | ITNA   | 77CHA 01  |
|                        |       |     |        |           | 250              | 80    | D   | ITNA   | 78RYA 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc         | Uncer | Com | Method | Reference | Conc               | Uncer | Com | Method | Reference |
|--------------|-------|-----|--------|-----------|--------------------|-------|-----|--------|-----------|
| <u>K (%)</u> |       |     |        |           | <u>K (%) cont.</u> |       |     |        |           |
| 1.29         | 0.09  |     | ITNA   | 76KUC 01  | 1.9                | 0.5   |     | 14NAA  | 81WIL 01  |
| 1.51         |       |     | ICPES  | 80NAD 01  | 1.97               |       | 35  | ITNA   | 81GLA 04  |
| 1.51         | 0.05  |     | ITNA   | 78MAC 01  | 2.18               | 0.24  |     | ITNA   | 73SHE 01  |
| 1.54         | 0.04  |     | ITNA   | 76BLO 01  | 3.3                | 0.66  |     | OES    | 76WEW 01  |
| 1.56         |       |     | ICPES  | 84CLE 01  |                    |       |     |        |           |
| 1.58         | 0.15  |     | ITNA   | 75OND 01  | <u>La (ug/g)</u>   |       |     |        |           |
| 1.59         | 0.05  |     | PAA    | 76KAT 02  | 45                 | 4.5   |     | OES    | 76WEW 01  |
| 1.59         | 0.05  |     | PAA    | 76KAT 03  | 64                 | 2     |     | ITNA   | 78NAD 02  |
| 1.6          |       |     | OES    | 80WAL 01  | 64.1               | 1.6   |     | ITNA   | 75NAD 02  |
| 1.6          | 0.04  |     | ICPES  | 81CHU 01  | 68                 | 2     |     | ITNA   | 78MAC 01  |
| 1.6          | 0.06  | D   | PAA    | 76CHA 01  | 68                 | 5     |     | ICPES  | 85HAR 01  |
| 1.6          | 0.06  |     | PAA    | 77CHA 01  | 70                 |       |     | UU     | 80HEN 01  |
| 1.6          | 0.12  |     | AA     | 80STO 02  | 71.9               |       |     | ITNA   | 84GLA 02  |
| 1.61         |       |     | ITNA   | 78WEA 01  | 72                 | 6     |     | XRF    | 79SMI 01  |
| 1.63         |       |     | XRF    | 78CAM 02  | 74                 | 4     |     | ITNA   | 78LAU 02  |
| 1.63         | 0.06  |     | ITNA   | 77MAE 01  | 74.8               |       |     | ITNA   | 82GLA 02  |
| 1.64         | 0.01  |     | AA     | 82HAR 01  | 75                 | 4     | 35  | ITNA   | 81GLA 03  |
| 1.65         | 0.09  |     | ITNA   | 78LAU 02  | 76                 | 14    |     | ITNA   | 76OND 01  |
| 1.66         | 0.04  |     | XRF    | 79SMI 01  | 76.4               | 4.5   |     | ITNA   | 81WAN 01  |
| 1.67         | 0.06  |     | EXRF   | 78PEL 01  | 77                 | 8     |     | ITNA   | 73SHE 01  |
| 1.67         | 0.07  |     | ICPES  | 84BOT 01  | 78                 |       |     | XRF    | 78CAM 02  |
| 1.68         |       |     | AA     | 79SIL 01  | 78                 |       |     | ICPES  | 80FLO 01  |
| 1.69         |       | 35  | TCGS   | 78GLA 04  | 79                 | 1.6   |     | ICPES  | 81CHU 01  |
| 1.69         | 0.13  | D   | ITNA   | 78RYA 01  | 79                 | 6     | 35  | IENA   | 80GLA 03  |
| 1.69         | 0.13  |     | ITNA   | 77CHA 01  | 80                 |       |     | ITNA   | 75MIL 01  |
| 1.7          |       |     | ITNA   | 78KEL 02  | 81                 | 2     |     | ITNA   | 76RAG 01  |
| 1.7          | 0.2   |     | ITNA   | 76OND 01  | 81                 | 3     | D   | NAA    | 79STE 01  |
| 1.71         | 0.03  |     | GAMMA  | 75OND 01  | 81.2               | 3.2   |     | IENA   | 76STE 05  |
| 1.71         | 0.03  |     | GAMMA  | 73ABE 01  | 81.2               | 3.3   |     | IENA   | 77ROW 03  |
| 1.71         | 0.04  |     | AA     | 76OND 01  | 82                 |       |     | ITNA   | 78WEA 01  |
| 1.71         | 0.1   |     | ICPES  | 84NAD 01  | 82                 |       |     | ITNA   | 75KLE 01  |
| 1.72         | 0.09  |     | ICPES  | 80NAD 01  | 82                 | 2     |     | ITNA   | 75OND 01  |
| 1.73         | 0.18  |     | ITNA   | 81WAN 01  | 82                 | 4     |     | ITNA   | 73ABE 01  |
| 1.74         | 0.07  |     | EXRF   | 77NIE 01  | 82                 | 20    |     | EXRF   | 77GIA 01  |
| 1.75         |       |     | UU     | 80HEN 01  | 83                 | 0.9   |     | ITNA   | 85FIL 01  |
| 1.75         | 0.1   |     | TCGS   | 79AND 01  | 84                 | 2     |     | RTNA   | 84ODD 01  |
| 1.75         | 0.18  |     | ITNA   | 76RAG 01  | 84                 | 3.6   |     | IENA   | 77ROW 04  |
| 1.76         | 0.05  | D   | TCGS   | 80AND 01  | 84                 | 3.6   |     | ITNA   | 77ROW 03  |
| 1.76         | 0.05  |     | TCGS   | 79FAI 01  | 85                 | 3     |     | ITNA   | 84ODD 01  |
| 1.76         | 0.19  |     | ITNA   | 85FIL 01  | 85                 | 4     | D   | ITNA   | 78RYA 01  |
| 1.77         |       |     | ITNA   | 75MIL 01  | 85                 | 4     |     | ITNA   | 77CHA 01  |
| 1.78         | 0.23  |     | ITNA   | 75NAD 02  | 85.3               | 3.8   |     | ITNA   | 77ROW 04  |
| 1.78         | 0.24  |     | ITNA   | 78NAD 02  | 86                 | 2     |     | ITNA   | 76WEW 01  |
| 1.8          |       |     | ITNA   | 75KLE 01  | 91                 | 7     |     | ITNA   | 76STE 05  |
| 1.8          | 0.1   |     | ICPES  | 85HAR 01  | 110                | 20    |     | SSMS   | 78SUG 02  |
| 1.8          | 0.13  |     | ITNA   | 77ROW 03  | 120                |       |     | SSMS   | 83WEI 02  |
| 1.8          | 0.13  | D   | NAA    | 79STE 01  |                    |       |     |        |           |
| 1.8          | 0.13  |     | ITNA   | 76STE 05  |                    |       |     |        |           |
| 1.8          | 0.3   |     | 14NAA  | 81WIL 02  |                    |       |     |        |           |
| 1.81         | 0.15  | 35  | ITNA   | 81GLA 03  |                    |       |     |        |           |
| 1.83         | 0.05  | 35  | IENA   | 80GLA 03  |                    |       |     |        |           |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Li (ug/g)</u> |       |     |        |           | <u>Mg (%) cont.</u> |       |     |        |           |
| 1.7              | 0.3   |     | ICPES  | 81CHU 01  | 1.5                 | 0.15  |     | PAA    | 76CHA 01  |
| 80               |       |     | AA     | 76WEW 01  | 1.5                 | 0.2   |     | TCGS   | 79FAI 01  |
| 140              | 9     |     | OES    | 76WEW 01  | 1.5                 | 0.2   | D   | TCGS   | 80AND 01  |
| 161              | 14    |     | ICPES  | 84BOT 01  | 1.5                 | 0.3   |     | ITNA   | 76WEW 01  |
| 186              |       |     | ICPES  | 84CLE 01  | 1.5                 | 1.3   |     | 14NAA  | 81WIL 01  |
| 300              |       |     | UU     | 80HEN 01  | 1.52                | 0.06  |     | ITNA   | 75NAD 02  |
| <u>Lu (ug/g)</u> |       |     |        |           | 1.52                | 0.06  |     | ITNA   | 78NAD 02  |
|                  |       |     |        |           | 1.597               | 0.806 |     | ITNA   | 73SHE 01  |
| 0.78             |       |     | SSMS   | 83WEI 02  | 1.6                 | 0.32  |     | OES    | 76WEW 01  |
| 0.87             |       |     | ITNA   | 82GLA 02  | 1.68                | 0.21  |     | ITNA   | 77CHA 01  |
| 0.9              | 0.3   |     | ITNA   | 81WAN 01  | 1.68                | 0.21  | D   | ITNA   | 78RYA 01  |
| 0.94             | 0.09  | D   | ITNA   | 77ROW 04  | 1.78                | 0.2   |     | ITNA   | 76STE 05  |
| 0.94             | 0.09  |     | ITNA   | 77ROW 03  | 1.78                | 0.2   | D   | ITNA   | 77ROW 03  |
| 0.94             | 0.09  | D   | NAA    | 79STE 01  | 1.78                | 0.2   | D   | NAA    | 79STE 01  |
| 1                | 0.1   |     | ITNA   | 75OND 01  | 1.8                 |       |     | ICPES  | 80FLO 01  |
| 1                | 0.2   |     | ITNA   | 76WEW 01  | 1.8                 |       |     | OES    | 80WAL 01  |
| 1.01             | 0.02  |     | ITNA   | 78NAD 02  | 1.8                 | 0.4   |     | ITNA   | 78WEA 01  |
| 1.01             | 0.02  |     | ITNA   | 75NAD 02  | 1.8                 |       |     | ITNA   | 75OND 01  |
| 1.1              |       | 35  | ITNA   | 81GLA 03  | 2                   |       |     | UU     | 80HEN 01  |
| 1.1              | 0.15  | D   | ITNA   | 78RYA 01  | 2                   | 0.4   |     | ITNA   | 76RAG 01  |
| 1.1              | 0.15  |     | ITNA   | 77CHA 01  | 2.08                | 0.43  |     | ITNA   | 73ABE 01  |
| 1.11             | 0.22  |     | ITNA   | 84GLA 11  | 2.1                 | 0.5   |     | 14NAA  | 81WIL 02  |
| 1.2              |       |     | ITNA   | 75MIL 01  | 2.19                | 0.35  |     | ITNA   | 81WAN 01  |
| 1.56             | 0.01  |     | RTNA   | 84ODD 01  | 2.4                 |       | 35  | TCGS   | 78GLA 04  |
| 1.68             | 0.06  |     | ITNA   | 84ODD 01  | 6.3                 | 0.3   |     | ITNA   | 78MAC 01  |
| 1.7              | 0.4   |     | SSMS   | 78SUG 02  | <u>Mn (ug/g)</u>    |       |     |        |           |
| 2                | 0.05  |     | ITNA   | 78LAU 02  | 351                 |       | 6   | SSMS   | 78GUI 01  |
| 3.8              | 0.5   |     | ITNA   | 73SHE 01  | 388                 |       |     | ICPES  | 84SOB 01  |
| 4                | 1     |     | ITNA   | 78MAC 01  | 420                 |       |     | ITNA   | 78KEL 02  |
| <u>Mg (%)</u>    |       |     |        |           | 422.4               | 3.9   |     | AA     | 77MIT 01  |
| 0.84             | 0.05  |     | AA     | 82HAR 01  | 440                 |       |     | AA     | 78WEG 01  |
| 1.01             |       |     | ICPES  | 80NAD 01  | 460                 |       |     | ITNA   | 75KLE 01  |
| 1.2              | 0.1   |     | AA     | 76OND 01  | 460                 | 26    |     | OES    | 76WEW 01  |
| 1.22             |       |     | AA     | 79SIL 01  | 464                 | 1     |     | ITNA   | 78NAD 02  |
| 1.25             | 0.06  |     | ICPES  | 85HAR 01  | 464                 | 1.4   |     | ITNA   | 75NAD 02  |
| 1.29             | 0.02  |     | ICPES  | 80NAD 01  | 464                 | 46    |     | ITNA   | 76KUC 01  |
| 1.29             | 0.03  |     | ICPES  | 84BOT 01  | 465                 |       |     | ICPES  | 84CLE 01  |
| 1.3              | 0.04  |     | ICPES  | 84NAD 01  | 466                 | 31    |     | ITNA   | 73SHE 01  |
| 1.32             | 0.04  |     | ICPES  | 81CHU 01  | 470                 | 20    |     | ICPES  | 85HAR 01  |
| 1.34             |       |     | ICPES  | 84CLE 01  | 477                 | 5     |     | AA     | 76OND 01  |
| 1.4              |       |     | OES    | 78SUG 01  | 478                 |       |     | FAA    | 78GUI 01  |
| 1.4              | 0.4   |     | ITNA   | 78LAU 02  | 480                 | 10    |     | ITNA   | 76BLO 01  |
| 1.4              | 0.4   |     | ITNA   | 77MAE 01  | 480                 | 25    | D   | TCGS   | 80AND 01  |
| 1.44             | 0.02  |     | PAA    | 76KAT 03  | 480                 | 25    |     | TCGS   | 79FAI 01  |
| 1.45             | 0.05  |     | AA     | 80STO 02  | 482                 |       |     | ICPES  | 80NAD 01  |
| 1.48             | 0.01  |     | PAA    | 74CHA 01  | 483                 | 12    |     | ICPES  | 84NAD 01  |
| 1.5              | 0.01  |     | PAA    | 76KAT 02  | 483                 | 21    |     | XRF    | 79SMI 01  |
| 1.5              | 0.15  | D   | PAA    | 77CHA 01  | 485                 |       |     | AA     | 79SIL 01  |
|                  |       |     |        |           | 488                 | 14    |     | ITNA   | 77ROW 03  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mn (ug/g) cont.</u> |       |     |        |           | <u>Mo (ug/g)</u> |       |     |        |           |
| 488                    | 14    | D   | NAA    | 79STE 01  | 0.5              | 0.08  | D   | PAA    | 77CHA 01  |
| 488                    | 14    |     | ITNA   | 76STE 05  | 0.5              | 0.08  |     | PAA    | 76CHA 01  |
| 488                    | 50    |     | ITNA   | 81WAN 01  | 1.52             | 0.15  |     | PAA    | 74CHA 01  |
| 489                    | 11    |     | ITNA   | 73ABE 01  | 20               |       |     | ITNA   | 78WEA 01  |
| 490                    |       |     | SSMS   | 83WEI 02  | 20               |       |     | UU     | 80HEN 01  |
| 490                    | 14    |     | ICPES  | 84BOT 01  | 22.3             | 1.6   |     | 14NAA  | 81WIL 02  |
| 491                    | 10    |     | PAA    | 76KAT 02  | 25               | 5     |     | EXRF   | 77GIA 01  |
| 491                    | 18    |     | PAA    | 76KAT 03  | 25.3             | 1.6   | D   | NAA    | 79STE 01  |
| 492                    |       |     | AA     | 78GUI 01  | 25.3             | 1.6   |     | IENA   | 77ROW 03  |
| 492                    | 7     |     | AA     | 82HAR 01  | 25.3             | 1.6   | D   | IENA   | 77ROW 04  |
| 493                    | 4.1   |     | AA     | 74RAI 01  | 26               |       |     | SSMS   | 83WEI 02  |
| 495                    |       |     | ITNA   | 78WEA 01  | 26               | 2     |     | ICPES  | 84BOT 01  |
| 495                    | 15    |     | PAA    | 76CHA 01  | 28               | 1     |     | XRF    | 79SMI 01  |
| 495                    | 15    | D   | PAA    | 77CHA 01  | 28               | 1     | 35  | IENA   | 80GLA 03  |
| 495                    | 25    |     | PAA    | 74CHA 01  | 28               | 1     | 35  | IENA   | 81GLA 03  |
| 496                    |       |     | OES    | 80WAL 01  | 28               | 1.3   |     | 14NAA  | 81WIL 01  |
| 496                    | 19    | D   | NAA    | 74OND 01  | 32               |       |     | ICPES  | 80NAD 01  |
| 496                    | 19    |     | ITNA   | 75OND 01  | 36               | 3     | 35  | RTNA   | 78GLA 02  |
| 498                    | 11    | 35  | ITNA   | 81GLA 03  | 36               | 5     |     | FAA    | 76OWE 01  |
| 499                    | 22    | 6   | FAA    | 79GEL 01  | 37               | 1.3   |     | OES    | 76WEW 01  |
| 499                    | 25    |     | ITNA   | 76OND 01  |                  |       |     |        |           |
| 500                    |       |     | OES    | 78SUG 01  | <u>N (ug/g)</u>  |       |     |        |           |
| 500                    |       |     | EXRF   | 78WEG 01  |                  |       |     |        |           |
| 500                    |       |     | UU     | 80HEN 01  | <                | 1000  | L   | UU     | 80HEN 01  |
| 500                    | 15    |     | ITNA   | 77CHA 01  |                  |       |     |        |           |
| 500                    | 15    | D   | ITNA   | 78RYA 01  | <u>Na (ug/g)</u> |       |     |        |           |
| 500                    | 17    |     | EXRF   | 78PEL 01  |                  |       |     |        |           |
| 503                    | 15    |     | ITNA   | 77MAE 01  | 2603             | 156   |     | ITNA   | 76KUC 01  |
| 504                    | 25    |     | ITNA   | 76WEW 01  | 2658             | 129   |     | ITNA   | 73SHE 01  |
| 505                    | 9     | 35  | ITNA   | 81GLA 02  | 2800             | 300   |     | ITNA   | 76BLO 01  |
| 505                    | 14    |     | ITNA   | 76RAG 01  | 2820             | 50    |     | ITNA   | 78MAC 01  |
| 506                    |       |     | AA     | 76WEW 01  | 2830             | 136   |     | ITNA   | 76STE 05  |
| 508                    |       |     | XRF    | 78CAM 02  | 2830             | 140   | D   | NAA    | 79STE 01  |
| 510                    |       |     | ICPES  | 80FLO 01  | 2830             | 140   |     | ITNA   | 77ROW 03  |
| 510                    | 10    |     | ITNA   | 78LAU 02  | 2900             |       |     | ICPES  | 80NAD 01  |
| 510                    | 70    |     | XRF    | 81COH 02  | 2900             |       |     | OES    | 78SUG 01  |
| 513                    | 15    | 35  | IENA   | 80GLA 03  | 3000             |       |     | AA     | 79SIL 01  |
| 516                    | 16    |     | ICPES  | 81CHU 01  | 3000             |       |     | OES    | 80WAL 01  |
| 520                    | 6     |     | FAA    | 76OWE 01  | 3000             |       |     | UU     | 80HEN 01  |
| 520                    | 20    |     | ITNA   | 78MAC 01  | 3000             | 70    |     | ICPES  | 81CHU 01  |
| 528                    |       | 6   | SSMS   | 78GUI 01  | 3000             | 100   |     | ITNA   | 78LAU 02  |
| 528                    | 104   |     | EXRF   | 77GIA 01  | 3000             | 200   |     | TCGS   | 79FAI 01  |
| 530                    | 30    |     | AA     | 80STO 02  | 3000             | 200   | D   | TCGS   | 80AND 01  |
| 531                    | 14    |     | EXRF   | 77NIE 01  | 3000             | 200   |     | ICPES  | 84NAD 01  |
| 540                    |       |     | ITNA   | 75MIL 01  | 3052             | 264   |     | ITNA   | 81WAN 01  |
| 570                    | 24    | 6   | FAA    | 79GEL 01  | 3070             | 80    |     | ITNA   | 77MAE 01  |
|                        |       |     |        |           | 3100             | 200   |     | ICPES  | 80NAD 01  |
|                        |       |     |        |           | 3100             | 300   |     | ITNA   | 76OND 01  |
|                        |       |     |        |           | 3130             |       |     | ITNA   | 84GLA 02  |
|                        |       |     |        |           | 3150             | 110   |     | 14NAA  | 81WIL 01  |
|                        |       |     |        |           | 3200             |       |     | SSMS   | 83WEI 02  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                         | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------------|-------|-----|--------|-----------|
| <u>Na (ug/g) cont.</u> |       |     |        |           | <u>Nd (ug/g) cont.</u>       |       |     |        |           |
| 3200                   |       |     | ITNA   | 78WEA 01  | 69                           | 7     |     | ITNA   | 77CHA 01  |
| 3200                   | 200   |     | AA     | 76OND 01  | 69                           | 7     | D   | ITNA   | 78RYA 01  |
| 3200                   | 200   |     | AA     | 82HAR 01  | 81                           |       |     | ITNA   | 75MIL 01  |
| 3200                   | 200   |     | ICPES  | 84BOT 01  | 90                           | 13    |     | SSMS   | 78SUG 02  |
| 3200                   | 300   | D   | ITNA   | 78RYA 01  | 94                           | 19    |     | ICPES  | 81CHU 01  |
| 3200                   | 300   |     | ITNA   | 77CHA 01  |                              |       |     |        |           |
| 3200                   | 400   |     | ITNA   | 75OND 01  |                              |       |     |        |           |
| 3220                   | 50    | 35  | ITNA   | 81GLA 03  | <u>NH<sub>4</sub> (ug/g)</u> |       |     |        |           |
| 3230                   |       |     | ICPES  | 84CLE 01  | <                            | 100   | L   | UU     | 80HEN 01  |
| 3240                   | 100   |     | ITNA   | 76RAG 01  |                              |       |     |        |           |
| 3290                   | 110   |     | AA     | 80STO 02  | <u>Ni (ug/g)</u>             |       |     |        |           |
| 3300                   | 100   | 35  | ITNA   | 81GLA 02  | 69                           | 7     |     | IENA   | 77ROW 03  |
| 3300                   | 100   |     | ICPES  | 85HAR 01  | 78                           |       |     | AA     | 76WEW 01  |
| 3300                   | 150   |     | PAA    | 76CHA 01  | 84                           | 2     | 35  | IENA   | 81GLA 04  |
| 3300                   | 150   | D   | PAA    | 77CHA 01  | 84                           | 6     | 35  | IENA   | 80GLA 03  |
| 3300                   | 200   |     | ITNA   | 78NAD 02  | 85                           |       |     | AA     | 78GUI 01  |
| 3300                   | 200   |     | ITNA   | 75NAD 02  | 88                           | 2     |     | ICPES  | 84BOT 01  |
| 3330                   | 170   |     | 14NAA  | 81WIL 02  | 92                           | 6     |     | PAA    | 75OND 01  |
| 3400                   |       |     | ITNA   | 75MIL 01  | 92                           | 9     | 6   | PAA    | 82SEG 01  |
| 3400                   | 300   |     | ITNA   | 76WEW 01  | 93                           |       |     | EXRF   | 78WEG 01  |
| 3400                   | 300   |     | PAA    | 74CHA 01  | 93                           | 5     | 8   | SSMS   | 80KOP 01  |
| 3600                   |       | 35  | TCGS   | 78GLA 04  | 94                           |       |     | XRF    | 78CAM 02  |
| 3700                   | 200   |     | ITNA   | 73ABE 01  | 94                           |       |     | ICPES  | 80FLO 01  |
| 3850                   | 210   |     | PAA    | 76KAT 03  | 95                           | 9     | D   | ITNA   | 78RYA 01  |
| 3860                   | 130   |     | PAA    | 76KAT 02  | 95                           | 9     |     | ITNA   | 77CHA 01  |
| 9700                   | 1900  |     | OES    | 76WEW 01  | 95                           | 20    |     | EXRF   | 78PEL 01  |
| <u>Nb (ug/g)</u>       |       |     |        |           | 96                           | 3     |     | PAA    | 76KAT 02  |
| <                      | 100   | L   | OES    | 76WEW 01  | 96                           | 5     |     | XRF    | 79SMI 01  |
| 7                      |       |     | UU     | 80HEN 01  | 96                           | 5     |     | ICPES  | 85HAR 01  |
| 26                     | 1     |     | XRF    | 79SMI 01  | 96.4                         | 1.2   | 6   | IDMS   | 74MOO 01  |
| 28                     | 2     |     | EXRF   | 77GIA 01  | 96.4                         | 1.2   | 6   | IDMS   | 74MOO 01  |
| 56                     |       |     | SSMS   | 83WEI 02  | 96.6                         | 1     | 6   | IDMS   | 74MOO 01  |
| <u>Nd (ug/g)</u>       |       |     |        |           | 96.8                         | 3.2   |     | PAA    | 74CHA 01  |
| 57.8                   | 1.6   | D   | ITNA   | 77ROW 04  | 97                           | 5     |     | PAA    | 76CHA 01  |
| 57.8                   | 1.6   |     | ITNA   | 77ROW 03  | 97                           | 5     | D   | PAA    | 77CHA 01  |
| 58                     | 2     | D   | NAA    | 79STE 01  | 97                           |       |     | POL    | 74MAI 01  |
| 58                     | 10    |     | ITNA   | 81WAN 01  | 98                           |       |     | FAA    | 80WAL 01  |
| 60                     |       | 35  | IENA   | 81GLA 04  | 98                           | 9     | D   | NAA    | 74OND 01  |
| 60                     |       |     | SSMS   | 83WEI 02  | 98.5                         | 9.5   |     | IENA   | 77ROW 04  |
| 60                     | 2     | 35  | IENA   | 80GLA 03  | 99                           |       |     | AA     | 79SIL 01  |
| 60.5                   | 1.5   |     | ITNA   | 75NAD 02  | 99                           | 4     |     | AF     | 80EPS 02  |
| 61                     | 2     |     | ITNA   | 78NAD 02  | 99                           | 9     | D   | NAA    | 79STE 01  |
| 62                     | 2     |     | TCGS   | 80AND 01  | 99.7                         | 3.3   |     | AA     | 77MIT 01  |
| 62.1                   | 2.4   |     | TCGS   | 79FAI 01  | 100                          |       |     | UU     | 80HEN 01  |
| 66                     | 7     |     | ITNA   | 76OND 01  | 100                          |       |     | ICPES  | 84CLE 01  |
| 67                     | 2     |     | RTNA   | 84ODD 01  | 100                          | 3     |     | ICPES  | 81CHU 01  |
| 69                     | 4     |     | ITNA   | 84ODD 01  | 100                          | 5     |     | ITNA   | 75NAD 02  |
|                        |       |     |        |           | 100                          | 5     |     | ITNA   | 78NAD 02  |
|                        |       |     |        |           | 100                          | 7     | 6   | PAA    | 82SEG 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                 | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|----------------------|-------|-----|--------|-----------|
| <u>Ni (ug/g) cont.</u> |       |     |        |           | <u>Pb (ug/g)</u>     |       |     |        |           |
| 100                    | 7     |     | AA     | 76OND 01  | 40                   |       | 6   | SSMS   | 78GUI 01  |
| 100                    | 20    |     | ITNA   | 76OND 01  | 46                   |       | 13  | ICPES  | 84BOT 01  |
| 101                    | 3.3   |     | AA     | 74RAI 01  | 55                   |       |     | FAA    | 75POL 01  |
| 101                    | 7     |     | EXRF   | 77GIA 01  | 62                   |       |     | AA     | 78GUI 01  |
| 105                    | 3     |     | 14NAA  | 81WIL 01  | 62.8                 |       |     | FAA    | 78GUI 01  |
| 105                    | 13    |     | ITNA   | 75OND 01  | 64                   | 13    |     | ICPES  | 81CHU 01  |
| 106                    |       |     | FAA    | 78GUI 01  | 65                   |       |     | EXRF   | 78WEG 01  |
| 106                    | 12    |     | 14NAA  | 81WIL 02  | 66                   | 6     |     | XRF    | 79SMI 01  |
| 109                    |       |     | XRF    | 75KLE 01  | 66                   | 12    |     | EXRF   | 78PEL 01  |
| 110                    |       |     | SSMS   | 83WEI 02  | 67                   |       |     | POL    | 74MAI 01  |
| 110                    | 7     |     | PAA    | 80SEG 01  | 68                   | 4     |     | PAA    | 80SEG 01  |
| 110                    | 10    | 9   | ITNA   | 78LAU 02  | 68                   | 4     | 6   | PAA    | 82SEG 01  |
| 120                    |       |     | OES    | 78SUG 01  | 68                   | 5     | 13  | ICPES  | 84BOT 01  |
| 120                    | 7.5   |     | OES    | 76WEW 01  | 68                   | 6     | 8   | SSMS   | 80KOP 01  |
| 121                    | 21    |     | ITNA   | 85FIL 01  | 68.8                 |       |     | POT    | 82CHR 01  |
| 128                    |       |     | ICPES  | 80NAD 01  | 69                   | 4     | 6   | PAA    | 82SEG 01  |
| 330                    |       |     | ICPES  | 84SOB 01  | 70                   |       |     | AA     | 79SIL 01  |
|                        |       |     |        |           | 70                   |       |     | AA     | 78GEL 01  |
|                        |       |     |        |           | 70                   |       | 6   | SSMS   | 78GUI 01  |
| <u>NO2 (ug/g)</u>      |       |     |        |           | 70.5                 |       |     | FAA    | 78SIE 01  |
| <                      | 100   | L   | UU     | 80HEN 01  | 70.7                 | 2.6   |     | PAA    | 74CHA 01  |
|                        |       |     |        |           | 71                   | 3     |     | NAA    | 77JER 01  |
| <u>NO3 (ug/g)</u>      |       |     |        |           | 71                   | 3     |     | PAA    | 76CHA 01  |
| <                      | 100   | L   | UU     | 80HEN 01  | 71                   | 3     | D   | PAA    | 77CHA 01  |
|                        |       |     |        |           | 72                   | 5     |     | EXRF   | 77GIA 01  |
|                        |       |     |        |           | 74                   | 4     |     | FAA    | 76BLO 01  |
| <u>O (%)</u>           |       |     |        |           | 74                   | 4     |     | FAA    | 75BLO 02  |
| 47.02                  | 0.08  | 34  | 14NAA  | 80KHA 02  | 74                   | 9     |     | OES    | 76WEW 01  |
|                        |       |     |        |           | 75                   |       |     | OES    | 80WAL 01  |
|                        |       |     |        |           | 75                   | 5     |     | PAA    | 75OND 01  |
| <u>Os (ng/g)</u>       |       |     |        |           | 75                   | 5     | D   | NAA    | 74OND 01  |
| <                      | 400   | L   | UU     | 80HEN 01  | 76                   |       |     | AE+AF  | 77FEL 01  |
| <                      | 4000  |     | RTNA   | 77NAD 02  | 77                   |       |     | ICPES  | 80NAD 01  |
|                        |       |     |        |           | 77                   | 6     |     | AA     | 80STO 02  |
|                        |       |     |        |           | 78                   | 2     |     | IDMS   | 78CAR 02  |
| <u>P (ug/g)</u>        |       |     |        |           | 78                   | 2     |     | AA     | 76OND 01  |
| 750                    | 50    |     | ICPES  | 85HAR 01  | 78                   | 4     |     | IDMS   | 75KLE 01  |
| 880                    |       |     | AA     | 76WEW 01  | 79.6                 | 9.7   |     | HAA    | 82NAD 01  |
| 898                    |       |     | ICPES  | 80NAD 01  | 80                   |       |     | UU     | 80HEN 01  |
| 910                    | 30    |     | ICPES  | 84BOT 01  | 80                   | 10    |     | ICPES  | 85HAR 01  |
| 1040                   | 70    |     | ICPES  | 84NAD 01  | 81                   |       |     | ICPES  | 80FLO 01  |
| 1090                   | 26    |     | ICPES  | 81CHU 01  | 81                   |       |     | AA     | 78WEG 01  |
| 1200                   |       |     | UU     | 80HEN 01  | 82                   |       |     | AA     | 76WEW 01  |
| 1300                   |       |     | SSMS   | 83WEI 02  | 82                   | 6     |     | FAA    | 76OWE 01  |
| 1900                   | 100   |     | COLOR  | 80NAD 01  | 100                  | 25    |     | 14NAA  | 81WIL 02  |
| 3000                   |       | 35  | TCGS   | 78GLA 04  | 110                  |       |     | SSMS   | 83WEI 02  |
|                        |       |     |        |           | <u>Pb-21 (pCi/g)</u> |       |     |        |           |
|                        |       |     |        |           | 3.37                 | 0.13  | D   | NM     | 81CAS 01  |
|                        |       |     |        |           | 3.37                 | 0.13  |     | NM     | 80CAS 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Pd (ng/g)</u> |       |     |        |           | <u>Rb (ug/g) cont.</u> |       |     |        |           |
| <                | 2     |     | RTNA   | 77NAD 02  | 124                    | 10    |     | ITNA   | 73ABE 01  |
| <                | 1000  | L   | UU     | 80HEN 01  | 125                    |       |     | ITNA   | 78WEA 01  |
| <                | 4000  | L   | EXRF   | 77GIA 01  | 125                    | 4     |     | EXRF   | 77NIE 01  |
| <u>Pr (ug/g)</u> |       |     |        |           | 125                    | 10    |     | ITNA   | 75OND 01  |
| <                | 100   | L   | OES    | 76WEW 01  | 126                    | 10    |     | PAA    | 75OND 01  |
| 24               |       |     | ICPES  | 80FLO 01  | 130                    | 30    |     | ITNA   | 76OND 01  |
| 28               | 6     |     | SSMS   | 78SUG 02  | 136                    | 6     |     | ITNA   | 85FIL 01  |
| 40               |       |     | SSMS   | 83WEI 02  | 137                    | 4     |     | 14NAA  | 81WIL 01  |
| 92               | 1     |     | RTNA   | 84ODD 01  | 150                    |       |     | UU     | 80HEN 01  |
| <u>Pt (ug/g)</u> |       |     |        |           | <u>Re (ng/g)</u>       |       |     |        |           |
| <                | 90    | L   | OES    | 76WEW 01  | <                      | 200   | L   | UU     | 80HEN 01  |
| 0.4              |       |     | UU     | 80HEN 01  | <u>Rh (ug/g)</u>       |       |     |        |           |
| 0.451            | 0.011 |     | RTNA   | 77NAD 01  | <                      | 0.5   | L   | UU     | 80HEN 01  |
| 1.38             | 0.28  |     | RTNA   | 77NAD 02  | <                      | 4     | L   | EXRF   | 77GIA 01  |
| <u>Rb (ug/g)</u> |       |     |        |           | <                      | 30    | L   | OES    | 76WEW 01  |
| 70               | 30    |     | ITNA   | 81WAN 01  | <u>Ru (ug/g)</u>       |       |     |        |           |
| 95               | 1     |     | PAA    | 76KAT 02  | <                      | 0.5   | L   | UU     | 80HEN 01  |
| 96               | 2     |     | PAA    | 76KAT 03  | <                      | 30    | L   | OES    | 76WEW 01  |
| 100              | 10    | 9   | ITNA   | 78LAU 02  | 0.258                  | 0.02  |     | RTNA   | 77NAD 02  |
| 102              | 5     |     | 14NAA  | 81WIL 02  | 3                      | 2     |     | EXRF   | 77GIA 01  |
| 105              | 10    |     | ITNA   | 76RAG 01  | <u>S (ug/g)</u>        |       |     |        |           |
| 108              | 4     | D   | NAA    | 79STE 01  | 2000                   |       |     | XRF    | 81COH 02  |
| 108              | 4     |     | EXRF   | 77GIA 01  | 3900                   | 400   |     | TCGS   | 79FAI 01  |
| 108.4            | 3.7   |     | IENA   | 77ROW 03  | 3900                   | 400   | D   | TCGS   | 80AND 01  |
| 108.4            | 3.7   | D   | IENA   | 77ROW 04  | 4000                   | 400   |     | TCGS   | 79AND 01  |
| 110              | 2     |     | XRF    | 79SMI 01  | 4400                   | 100   |     | TCGS   | 77JUR 01  |
| 110              | 9     |     | ITNA   | 77ROW 04  | 4930                   | 490   | 7   | NM     | 83LI 01   |
| 110              | 22    |     | OES    | 76WEW 01  | 5090                   | 530   | 7   | NM     | 83LI 01   |
| 111              | 7     |     | ITNA   | 84GLA 02  | 7800                   |       |     | XRF    | 78CAM 02  |
| 111              | 13.5  |     | ITNA   | 75NAD 02  | 9000                   | 500   |     | XRF    | 79SMI 01  |
| 111              | 14    |     | ITNA   | 78NAD 02  | <u>Sb (ug/g)</u>       |       |     |        |           |
| 112              | 20    |     | ITNA   | 76WEW 01  | 4                      | 3     |     | EXRF   | 77GIA 01  |
| 114              |       |     | XRF    | 78CAM 02  | 5                      |       |     | ICPES  | 82NYG 01  |
| 115              | 10    |     | ITNA   | 78LAU 02  | 5.9                    | 0.3   |     | ITNA   | 81WAN 01  |
| 115              | 15    |     | ITNA   | 73SHE 01  | 5.9                    | 0.5   | 5   | IENA   | 77ROW 04  |
| 116              | 10    |     | ITNA   | 77CHA 01  | 5.9                    | 0.5   | 5   | ITNA   | 77ROW 04  |
| 116              | 10    | D   | ITNA   | 78RYA 01  | 5.96                   | 0.61  |     | HAA    | 82NAD 01  |
| 117              | 6     | 35  | IENA   | 80GLA 03  | 6                      | 0.2   |     | IENA   | 77ROW 03  |
| 118              | 7     | 35  | NAA    | 81GLA 04  | 6                      | 0.2   | D   | NAA    | 79STE 01  |
| 119              | 7     | 35  | ITNA   | 81GLA 02  | 6.03                   | 0.23  | 5   | IENA   | 77ROW 04  |
| 120              |       |     | XRF    | 75KLE 01  | 6.1                    | 0.4   | 5   | ITNA   | 77ROW 04  |
| 120              |       |     | SSMS   | 83WEI 02  |                        |       |     |        |           |
| 120              | 10    |     | PAA    | 76CHA 01  |                        |       |     |        |           |
| 120              | 10    | D   | PAA    | 77CHA 01  |                        |       |     |        |           |
| 123              | 9     | 35  | ITNA   | 81GLA 03  |                        |       |     |        |           |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Sb (ug/g) cont.</u> |       |     |        |           | <u>Sc (ug/g) cont.</u> |       |     |        |           |
| 6.2                    |       | 35  | ITNA   | 81GLA 03  | 26.5                   | 0.2   |     | ITNA   | 84GLA 02  |
| 6.4                    | 0.2   |     | ITNA   | 78LAU 02  | 26.7                   | 0.2   | D   | ITNA   | 77ROW 04  |
| 6.5                    | 0.2   | 35  | RTNA   | 78GLA 02  | 26.7                   | 0.2   |     | ITNA   | 77ROW 03  |
| 6.6                    | 0.3   |     | ITNA   | 85FIL 01  | 26.7                   | 0.7   | D   | NAA    | 79STE 01  |
| 6.72                   | 0.35  |     | ITNA   | 75NAD 02  | 26.8                   | 0.2   |     | ITNA   | 78MAC 01  |
| 6.72                   | 0.35  |     | ITNA   | 78NAD 02  | 26.9                   | 0.3   |     | ITNA   | 81WAN 01  |
| 6.9                    |       |     | ITNA   | 78WEA 01  | 26.9                   | 1.4   |     | ITNA   | 76OND 01  |
| 6.9                    |       |     | SSMS   | 83WEI 02  | 27                     |       |     | ITNA   | 78WEA 01  |
| 6.9                    | 0.3   |     | ITNA   | 76OND 01  | 27                     | 0.5   |     | ITNA   | 78LAU 02  |
| 6.9                    | 0.5   | D   | ITNA   | 78RYA 01  | 27                     | 0.6   |     | ITNA   | 76RAG 01  |
| 6.9                    | 0.5   |     | ITNA   | 77CHA 01  | 27                     | 1     |     | ITNA   | 75OND 01  |
| 6.9                    | 0.6   |     | ITNA   | 76RAG 01  | 27                     | 1     |     | ITNA   | 73ABE 01  |
| 6.9                    | 0.6   |     | ITNA   | 75OND 01  | 27                     | 2     | D   | PAA    | 77CHA 01  |
| 7                      |       |     | UU     | 80HEN 01  | 27                     | 2     |     | PAA    | 76CHA 01  |
| 7                      | 1.1   |     | PAA    | 75OND 01  | 27.5                   | 2.4   |     | ITNA   | 73SHE 01  |
| 7                      | 1.2   |     | PAA    | 76KAT 03  | 28                     | 1     | 35  | ITNA   | 81GLA 02  |
| 7.1                    | 0.5   | D   | PAA    | 77CHA 01  | 28.3                   | 0.7   | 35  | ITNA   | 81GLA 04  |
| 7.1                    | 0.5   |     | PAA    | 76CHA 01  | 29                     | 3     |     | 14NAA  | 81WIL 02  |
| 7.1                    | 0.5   |     | NAA    | 77JER 01  | 29.1                   |       |     | ITNA   | 75MIL 01  |
| 7.1                    | 0.7   |     | PAA    | 76KAT 02  | 30                     | 1     | 35  | ITNA   | 81GLA 03  |
| 7.14                   | 0.56  |     | PAA    | 74CHA 01  | 30                     | 2     |     | ITNA   | 85FIL 01  |
| 7.2                    | 0.3   | 35  | ITNA   | 81GLA 02  | 32                     |       |     | ITNA   | 75KLE 01  |
| 7.2                    | 0.3   | 35  | NAA    | 81GLA 04  | 41                     | 5     |     | 14NAA  | 81WIL 01  |
| 7.2                    | 0.8   |     | ITNA   | 73ABE 01  | 45                     |       |     | SSMS   | 83WEI 02  |
| 7.3                    | 0.3   |     | FAA    | 78HAY 01  | <u>Se (ug/g)</u>       |       |     |        |           |
| 7.4                    | 0.3   |     | ITNA   | 78MAC 01  | 3.2                    |       |     | HAA    | 74BYR 02  |
| 7.7                    | 0.5   | 35  | IENA   | 80GLA 03  | 4.5                    | 0.7   |     | ASV    | 76AND 01  |
| 7.8                    |       |     | ITNA   | 75KLE 01  | 5.5                    | 3.4   |     | ITNA   | 81WAN 01  |
| 7.9                    |       |     | ITNA   | 84CLE 01  | 8.7                    | 1.8   |     | ITNA   | 78MAC 01  |
| 8.3                    | 1.8   |     | 14NAA  | 81WIL 02  | 8.76                   | 0.48  |     | HAA    | 82NAD 01  |
| 8.4                    | 3     | 13  | ICPES  | 84BOT 01  | 8.8                    |       |     | XRF    | 78CAM 02  |
| 9.8                    | 2.1   |     | ITNA   | 76WEW 01  | 8.8                    | 0.7   | 9   | ITNA   | 80WAN 01  |
| 12.08                  | 0.86  |     | ITNA   | 73SHE 01  | 8.8                    | 1.2   |     | ITNA   | 73ABE 01  |
| 17.4                   |       |     | FAA    | 75POL 01  | 8.9                    | 0.6   |     | ITNA   | 80WAN 01  |
| 54                     |       | 13  | ICPES  | 84BOT 01  | 8.9                    | 1.2   |     | XRF    | 79SMI 01  |
| <u>Sc (ug/g)</u>       |       |     |        |           | 9                      |       |     | ICPES  | 82NYG 01  |
| 20                     |       |     | ICPES  | 80FLO 01  | 9                      | 1.4   |     | ITNA   | 76RAG 01  |
| 20                     |       |     | UU     | 80HEN 01  | 9                      | 2     | 35  | IENA   | 80GLA 03  |
| 20.7                   | 2.1   |     | PAA    | 74CHA 01  | 9.1                    | 9.2   |     | ITNA   | 78NAD 02  |
| 23                     | 0.4   |     | ITNA   | 76BLO 01  | 9.1                    | 0.2   |     | ITNA   | 75NAD 02  |
| 23                     | 2.3   |     | OES    | 76WEW 01  | 9.1                    | 0.2   |     | ITNA   | 81CAR 02  |
| 24                     | 1     |     | ITNA   | 76WEW 01  | 9.1                    | 0.3   | 35  | NAA    | 81GLA 04  |
| 24                     | 2     |     | ICPES  | 85HAR 01  | 9.1                    | 1     |     | RTNA   | 74ORV 01  |
| 25.1                   | 0.5   |     | ITNA   | 75NAD 02  | 9.2                    | 2.6   |     | ICPES  | 84BOT 01  |
| 25.1                   | 0.5   |     | ITNA   | 78NAD 02  | 9.35                   | 0.03  |     | GCMES  | 75KLE 01  |
| 25.5                   | 2     | D   | ITNA   | 78RYA 01  | 9.35                   | 0.03  |     | GCMES  | 74TAL 02  |
| 25.5                   | 2     |     | ITNA   | 77CHA 01  | 9.35                   | 0.03  |     | DCPES  | 81CAR 02  |
| 25.6                   | 0.5   |     | IENA   | 77ROW 04  | 9.4                    |       |     | SSMS   | 83WEI 02  |
| 26                     | 2     | 35  | IENA   | 80GLA 03  | 9.48                   | 0.8   |     | PAA    | 74CHA 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Se (ug/g) cont.</u> |       |     |        |           | <u>Si (%) cont.</u> |       |     |        |           |
| 9.5                    | 0.8   |     | PAA    | 76CHA 01  | 22.6                |       |     | AA     | 79SIL 01  |
| 9.5                    | 0.8   | D   | PAA    | 77CHA 01  | 22.7                | 0.05  |     | ICPES  | 84NAD 01  |
| 9.6                    | 3.1   |     | ITNA   | 76BLO 01  | 22.8                | 0.8   |     | 14NAA  | 81WIL 01  |
| 9.7                    |       |     | COLOR  | 74BYR 02  | 23                  | 1     |     | EXRF   | 77NIE 01  |
| 9.8                    |       |     | ITNA   | 78WEA 01  | 23                  | 6     |     | 14NAA  | 76BLO 01  |
| 9.8                    | 0.5   | 6   | PAA    | 82SEG 01  | 23.5                | 0.5   | 35  | IENA   | 80GLA 03  |
| 9.8                    | 1     |     | ITNA   | 77CHA 01  | 24.5                | 1.1   |     | TCGS   | 79AND 01  |
| 9.8                    | 1     | D   | ITNA   | 78RYA 01  |                     |       |     |        |           |
| 10                     |       |     | UU     | 80HEN 01  | <u>Sm (ug/g)</u>    |       |     |        |           |
| 10                     | 0.5   | 9   | ITNA   | 78LAU 02  | 10.05               | 0.58  |     | ITNA   | 73SHE 01  |
| 10                     | 0.5   | 8   | SSMS   | 80KOP 01  | 10.4                | 0.9   |     | IENA   | 77ROW 04  |
| 10                     | 0.6   |     | RTNA   | 80KNA 01  | 11                  | 1     |     | ITNA   | 78MAC 01  |
| 10                     | 0.9   |     | PAA    | 80SEG 01  | 11.4                | 1.6   |     | IENA   | 76STE 05  |
| 10                     | 0.9   | 6   | PAA    | 82SEG 01  | 11.8                | 1.6   |     | IENA   | 77ROW 03  |
| 10                     | 2     |     | ITNA   | 76OND 01  | 12.1                | 0.4   |     | TCGS   | 79FAI 01  |
| 10.1                   | 2.2   |     | ITNA   | 76WEW 01  | 12.1                | 0.4   | D   | TCGS   | 80AND 01  |
| 10.2                   |       |     | HAA    | 80WAL 01  | 12.1                | 1     | D   | ITNA   | 78RYA 01  |
| 10.2                   | 1.4   |     | ITNA   | 75OND 01  | 12.1                | 1     |     | ITNA   | 77CHA 01  |
| 10.2                   | 1.4   | D   | NAA    | 74OND 01  | 12.1                | 1.4   | D   | NAA    | 79STE 01  |
| 10.3                   | 0.7   | D   | RTNA   | 81GAL 02  | 12.1                | 1.4   |     | ITNA   | 77ROW 04  |
| 10.3                   | 0.7   |     | RTNA   | 81GAL 01  | 12.3                | 0.6   |     | RTNA   | 84ODD 01  |
| 10.6                   | 1     |     | ITNA   | 78LAU 02  | 12.4                |       |     | ITNA   | 78WEA 01  |
| 10.6                   | 1.3   |     | ITNA   | 77ROW 04  | 12.4                | 0.5   |     | ITNA   | 73ABE 01  |
| 10.7                   | 0.4   |     | ITNA   | 85FIL 01  | 12.4                | 0.9   |     | ITNA   | 75OND 01  |
| 10.8                   | 0.8   | D   | NAA    | 79STE 01  | 12.8                | 0.6   |     | ITNA   | 76WEW 01  |
| 10.8                   | 0.8   | D   | IENA   | 77ROW 04  | 12.9                | 0.3   |     | ITNA   | 84ODD 01  |
| 10.8                   | 0.8   |     | IENA   | 77ROW 03  | 13                  |       |     | ITNA   | 84GLA 02  |
| 11                     | 1     |     | EXRF   | 77GIA 01  | 13                  | 0.3   |     | TCGS   | 79AND 01  |
| 11                     | 3     |     | ITNA   | 76KUC 01  | 13                  | 0.7   |     | ITNA   | 76RAG 01  |
| 12.7                   | 1.8   |     | ITNA   | 73SHE 01  | 13                  | 1.3   |     | ITNA   | 85FIL 01  |
| 13.3                   |       |     | ITNA   | 84CLE 01  | 13.2                |       |     | ITNA   | 82GLA 02  |
| 35                     | 13    |     | 14NAA  | 81WIL 02  | 13.4                | 0.7   |     | ITNA   | 76OND 01  |
| 35                     | 13    |     | 14NAA  | 81WIL 01  | 13.5                | 0.5   |     | ITNA   | 78LAU 02  |
| <u>Si (%)</u>          |       |     |        |           | 13.6                | 0.88  |     | ITNA   | 75NAD 02  |
| 16                     |       |     | OES    | 78SUG 01  | 13.6                | 0.9   |     | ITNA   | 78NAD 02  |
| 17                     | 3.4   |     | OES    | 76WEW 01  | 14.9                | 1     | 35  | ITNA   | 81GLA 03  |
| 17.7                   |       | 35  | TCGS   | 78GLA 04  | 15                  |       |     | ITNA   | 75KLE 01  |
| 20                     | 1.6   |     | PAA    | 76CHA 01  | 15.8                | 0.3   |     | ICPES  | 81CHU 01  |
| 20                     | 1.6   | D   | PAA    | 77CHA 01  | 17                  |       |     | SSMS   | 83WEI 02  |
| 20.4                   |       |     | ICPES  | 80NAD 01  | 20                  | 3     |     | SSMS   | 78SUG 02  |
| 20.9                   |       |     | UU     | 80HEN 01  |                     |       |     |        |           |
| 21                     | 2     |     | PAA    | 75OND 01  |                     |       |     |        |           |
| 21.5                   | 1.4   |     | XRF    | 79SMI 01  |                     |       |     |        |           |
| 21.8                   | 0.3   |     | TCGS   | 80AND 01  |                     |       |     |        |           |
| 21.8                   | 0.3   |     | TCGS   | 79FAI 01  |                     |       |     |        |           |
| 21.9                   |       |     | XRF    | 78CAM 02  |                     |       |     |        |           |
| 22                     | 1     | 35  | AA     | 81GLA 03  |                     |       |     |        |           |
| 22.4                   | 0.3   |     | ICPES  | 80NAD 01  |                     |       |     |        |           |
| 22.4                   | 1.6   |     | 14NAA  | 81WIL 02  |                     |       |     |        |           |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Sn (ug/g)</u> |       |     |        |           | <u>Sr (ug/g) cont.</u> |       |     |        |           |
| <                | 5     |     | ICPES  | 84CLE 01  | 1410                   | 400   |     | 14NAA  | 77VAN 01  |
| 2.8              |       |     | SSMS   | 83WEI 02  | 1430                   | 30    |     | XRF    | 79SMI 01  |
| 3                |       |     | UU     | 80HEN 01  | 1430                   | 60    | 5   | IENA   | 76STE 05  |
| 5                | 2     |     | EXRF   | 77GIA 01  | 1430                   | 60    | D   | NAA    | 79STE 01  |
| 5.7              | 0.6   |     | NM     | 81IMU 01  | 1460                   | 280   |     | ITNA   | 85FIL 01  |
| 6.7              | 1.4   |     | XRF    | 79SMI 01  | 1480                   | 50    |     | ITNA   | 77MAE 01  |
| 10               | 5     |     | OES    | 76WEW 01  | 1480                   | 60    |     | IENA   | 77ROW 03  |
| 10.2             | 1.4   |     | ITNA   | 77CHA 01  | 1480                   | 60    |     | ITNA   | 77ROW 04  |
| 10.2             | 1.4   | D   | ITNA   | 78RYA 01  | 1500                   |       |     | UU     | 80HEN 01  |
| 12               | 1     |     | PAA    | 76CHA 01  | 1500                   | 180   | D   | ITNA   | 78RYA 01  |
| 12               | 1     | D   | PAA    | 77CHA 01  | 1500                   | 180   |     | ITNA   | 77CHA 01  |
| 12.5             | 1.2   |     | PAA    | 74CHA 01  | 1500                   | 200   |     | ITNA   | 78LAU 02  |
| 12.7             | 0.82  |     | HAA    | 82NAD 01  | 1510                   | 60    | 5   | IENA   | 80GLA 03  |
| 740              | 210   |     | ITNA   | 73SHE 01  | 1520                   | 35    |     | IENA   | 77ROW 04  |
| <u>SO4 (%)</u>   |       |     |        |           | 1541                   | 188   |     | ITNA   | 81WAN 01  |
| 0.98             |       |     | UU     | 80HEN 01  | 1600                   | 100   | 9   | ITNA   | 78LAU 02  |
| <u>Sr (ug/g)</u> |       |     |        |           | 1620                   |       |     | ICPES  | 80FLO 01  |
| 126              |       |     | EXRF   | 78WEG 01  | 1700                   | 300   |     | ITNA   | 75OND 01  |
| 869              | 33    |     | ITNA   | 73SHE 01  | 1900                   | 200   |     | ITNA   | 73ABE 01  |
| 1200             | 300   |     | ITNA   | 76STE 05  | 2300                   | 1100  |     | OES    | 76WEW 01  |
| 1240             | 30    |     | ICPES  | 84BOT 01  | 8000                   |       |     | XRF    | 76WEW 01  |
| 1244             | 6     |     | PAA    | 76KAT 02  | <u>Ta (ug/g)</u>       |       |     |        |           |
| 1244             | 9     |     | PAA    | 76KAT 03  | 1.6                    |       |     | ITNA   | 75KLE 01  |
| 1250             | 230   |     | ITNA   | 76RAG 01  | 1.74                   | 0.1   | 35  | ITNA   | 81GLA 02  |
| 1256             | 37    |     | EXRF   | 78PEL 01  | 1.74                   | 0.12  | 35  | NAA    | 81GLA 04  |
| 1260             |       | 35  | IENA   | 81GLA 03  | 1.8                    |       |     | ITNA   | 78WEA 01  |
| 1260             | 30    | 5   | IENA   | 80GLA 03  | 1.8                    | 0.2   | 35  | IENA   | 80GLA 03  |
| 1300             |       | 35  | IENA   | 81GLA 04  | 1.8                    | 0.3   |     | ITNA   | 76OND 01  |
| 1300             | 200   |     | ITNA   | 76OND 01  | 1.8                    | 0.3   |     | ITNA   | 75OND 01  |
| 1301             |       |     | XRF    | 75KLE 01  | 1.81                   | 0.08  |     | ITNA   | 84GLA 02  |
| 1310             | 50    |     | 14NAA  | 81WIL 01  | 1.84                   | 0.09  |     | ITNA   | 85FIL 01  |
| 1310             | 60    |     | 14NAA  | 81WIL 02  | 1.9                    | 0.1   |     | ITNA   | 78LAU 02  |
| 1340             |       |     | AA     | 79SIL 01  | 1.9                    | 0.2   | 35  | ITNA   | 81GLA 03  |
| 1340             | 70    |     | ICPES  | 85HAR 01  | 1.9                    | 0.25  | D   | ITNA   | 78RYA 01  |
| 1340             | 100   |     | ITNA   | 78MAC 01  | 1.9                    | 0.25  |     | ITNA   | 77CHA 01  |
| 1342             | 20    |     | EXRF   | 77GIA 01  | 2.0                    |       |     | UU     | 80HEN 01  |
| 1360             | 110   | 5   | IENA   | 76STE 05  | 2.0                    | 0.06  |     | IENA   | 77ROW 03  |
| 1370             | 120   | D   | PAA    | 77CHA 01  | 2.00                   | 0.06  | D   | NAA    | 79STE 01  |
| 1370             | 120   |     | PAA    | 76CHA 01  | 2.00                   | 0.06  | D   | IENA   | 77ROW 04  |
| 1373             | 95    |     | PAA    | 74CHA 01  | 2.00                   | 0.1   |     | ITNA   | 78MAC 01  |
| 1375             | 28    |     | ICPES  | 81CHU 01  | 2.00                   | 0.2   |     | ITNA   | 76RAG 01  |
| 1380             |       |     | ICPES  | 84CLE 01  | 2.01                   | 0.14  |     | ITNA   | 77ROW 04  |
| 1390             |       |     | ITNA   | 75MIL 01  | 2.04                   | 0.03  |     | ITNA   | 78NAD 02  |
| 1390             |       |     | XRF    | 78CAM 02  | 2.04                   | 0.03  |     | ITNA   | 75NAD 02  |
| 1400             |       |     | SSMS   | 83WEI 02  | 2.1                    | 0.2   |     | ITNA   | 81WAN 01  |
| 1406             | 80    |     | ITNA   | 75NAD 02  | 2.2                    |       |     | ITNA   | 75MIL 01  |
| 1406             | 80    |     | ITNA   | 78NAD 02  | 2.74                   | 0.25  |     | ITNA   | 73SHE 01  |
|                  |       |     |        |           | 3.5                    | 0.3   |     | ITNA   | 73ABE 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Tb (ug/g)</u> |       |     |        |           | <u>Th (ug/g) cont.</u> |       |     |        |           |
| 0.22             | 0.04  |     | ITNA   | 73SHE 01  | 24                     | 2     | 35  | RTNA   | 78GLA 02  |
| 1.2              | 0.2   |     | ITNA   | 78MAC 01  | 24                     | 2     |     | ITNA   | 76OND 01  |
| 1.5              | 0.3   |     | ITNA   | 81WAN 01  | 24.4                   | 2.2   |     | ITNA   | 75OND 01  |
| 1.5              | 0.4   |     | ITNA   | 76OND 01  | 24.5                   | 0.4   |     | ITNA   | 84GLA 02  |
| 1.53             | 0.11  |     | ITNA   | 84GLA 02  | 25                     | 0.9   | 35  | NAA    | 81GLA 04  |
| 1.7              | 0.8   |     | ITNA   | 85FIL 01  | 25                     | 1     | 35  | ITNA   | 81GLA 02  |
| 1.8              |       |     | ITNA   | 75MIL 01  | 25                     | 2     |     | ITNA   | 73SHE 01  |
| 1.87             | 0.15  |     | ITNA   | 76RAG 01  | 26                     |       |     | ITNA   | 75MIL 01  |
| 1.9              |       |     | SSMS   | 83WEI 02  | 26                     |       |     | ITNA   | 75KLE 01  |
| 1.9              | 0.1   |     | ITNA   | 78LAU 02  | 26                     |       |     | DNA    | 75MIL 01  |
| 1.9              | 0.3   |     | ITNA   | 75OND 01  | 26.2                   | 1.3   |     | GAMMA  | 73ABE 01  |
| 1.99             | 0.16  |     | ITNA   | 77ROW 04  | 26.2                   | 1.3   |     | GAMMA  | 75OND 01  |
| 2                | 0.1   | 35  | NAA    | 81GLA 04  | 28                     |       |     | SSMS   | 83WEI 02  |
| 2                | 0.1   | 35  | IENA   | 80GLA 03  | 28                     | 2     |     | ITNA   | 73ABE 01  |
| 2                | 0.25  | D   | ITNA   | 78RYA 01  | 32.2                   | 0.2   |     | ITNA   | 78NAD 02  |
| 2                | 0.25  |     | ITNA   | 77CHA 01  | 32.2                   | 0.2   |     | ITNA   | 75NAD 02  |
| 2                | 0.3   |     | ITNA   | 73ABE 01  |                        |       |     |        |           |
| 2.01             | 0.06  | D   | IENA   | 77ROW 04  | <u>Th-228 (pCi/g)</u>  |       |     |        |           |
| 2.01             | 0.06  |     | IENA   | 77ROW 03  | 2.23                   | 0.05  |     | NM     | 80CAS 01  |
| 2.01             | 0.06  | D   | NAA    | 79STE 01  | 2.23                   | 0.05  | D   | NM     | 81CAS 01  |
| 2.4              | 0.1   |     | ITNA   | 84ODD 01  |                        |       |     |        |           |
| 2.5              | 0.1   |     | RTNA   | 84ODD 01  | <u>Th-23 (pCi/g)</u>   |       |     |        |           |
| 3.12             | 0.02  |     | ITNA   | 75NAD 02  | 3.74                   | 0.17  | D   | NM     | 81CAS 01  |
| 3.12             | 0.02  |     | ITNA   | 78NAD 02  | 3.74                   | 0.17  |     | NM     | 80CAS 01  |
| 3.3              | 0.5   |     | SSMS   | 78SUG 02  |                        |       |     |        |           |
| <u>Te (ug/g)</u> |       |     |        |           | <u>Th-232 (pCi/g)</u>  |       |     |        |           |
| <                | 0.5   | L   | UU     | 80HEN 01  | 2.45                   | 0.08  | D   | NM     | 81CAS 01  |
| <                | 5     | L   | EXRF   | 77GIA 01  | 2.45                   | 0.08  |     | NM     | 80CAS 01  |
| 0.92             | 0.05  |     | HAA    | 82NAD 01  |                        |       |     |        |           |
| 2.3              | 0.3   |     | PAA    | 76CHA 01  |                        |       |     |        |           |
| 2.3              | 0.3   | D   | PAA    | 77CHA 01  | <u>Ti (ug/g)</u>       |       |     |        |           |
| 2.32             | 0.2   |     | PAA    | 74CHA 01  | 3000                   |       |     | XRF    | 76WEW 01  |
| 9.9              | 1.1   | 35  | RTNA   | 75GLA 01  | 6000                   |       |     | UU     | 80HEN 01  |
| <u>Th (ug/g)</u> |       |     |        |           | 6000                   | 400   |     | ITNA   | 78MAC 01  |
| 20               |       |     | UU     | 80HEN 01  | 6100                   |       |     | OES    | 78SUG 01  |
| 21               | 3     |     | EXRF   | 77GIA 01  | 6100                   | 200   |     | ITNA   | 78NAD 02  |
| 22.8             | 0.5   |     | ITNA   | 76BLO 01  | 6100                   | 200   |     | ITNA   | 75NAD 02  |
| 23               | 2     |     | ITNA   | 85FIL 01  | 6300                   | 200   |     | ICPES  | 84BOT 01  |
| 23.6             | 0.8   |     | ITNA   | 76RAG 01  | 6420                   |       |     | ITNA   | 75KLE 01  |
| 23.8             | 0.4   |     | ITNA   | 77ROW 04  | 6600                   | 300   |     | ICPES  | 85HAR 01  |
| 24               | 0.5   |     | IENA   | 77ROW 03  | 6800                   |       |     | AA     | 79SIL 01  |
| 24               | 0.5   | D   | IENA   | 77ROW 04  | 6800                   | 200   |     | ICPES  | 84NAD 01  |
| 24               | 0.5   | D   | NAA    | 79STE 01  | 6800                   | 1100  |     | ITNA   | 76OND 01  |
| 24               | 0.8   |     | ITNA   | 81WAN 01  | 6960                   |       | 35  | TCGS   | 78GLA 04  |
| 24               | 1     | 35  | ITNA   | 81GLA 03  | 7000                   | 100   | 35  | IENA   | 80GLA 03  |
| 24               | 1     |     | ITNA   | 78LAU 02  | 7000                   | 300   |     | ITNA   | 77ROW 03  |
| 24               | 1     | 35  | IENA   | 80GLA 03  | 7000                   | 300   | D   | NAA    | 76STE 05  |
|                  |       |     |        |           | 7000                   | 300   |     |        | 79STE 01  |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                 | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|----------------------|-------|-----|--------|-----------|
| <u>Ti (ug/g) cont.</u> |       |     |        |           | <u>Tm (ug/g)</u>     |       |     |        |           |
| 7000                   | 700   |     | ITNA   | 76WEW 01  | 0.45                 |       |     | SSMS   | 83WEI 02  |
| 7070                   | 180   |     | ICPES  | 81CHU 01  | 1.3                  |       |     | ITNA   | 75MIL 01  |
| 7100                   | 100   |     | ICPES  | 80NAD 01  | 1.3                  | 0.3   |     | SSMS   | 78SUG 02  |
| 7150                   | 1200  |     | ITNA   | 76RAG 01  | 1.36                 | 0.02  |     | RTNA   | 84ODD 01  |
| 7200                   | 200   | 35  | NAA    | 81GLA 03  | 1.43                 | 0.04  |     | ITNA   | 84ODD 01  |
| 7200                   | 200   |     | TCGS   | 79FAI 01  |                      |       |     |        |           |
| 7200                   | 200   | D   | TCGS   | 80AND 01  |                      |       |     |        |           |
| 7200                   | 1400  |     | OES    | 76WEW 01  |                      |       |     |        |           |
| 7210                   | 95    |     | TCGS   | 79AND 01  | 8.4                  | 0.56  |     | ITNA   | 73SHE 01  |
| 7230                   | 400   |     | PAA    | 74CHA 01  | 8.6                  | 1     | 35  | FLUOR  | 78GLA 01  |
| 7250                   | 360   | D   | PAA    | 77CHA 01  | 9                    | 6     |     | EXRF   | 77GIA 01  |
| 7250                   | 360   |     | PAA    | 76CHA 01  | 10.5                 | 1     |     | ITNA   | 76RAG 01  |
| 7300                   |       |     | XRF    | 78CAM 02  | 10.6                 |       |     | ITNA   | 81WAN 01  |
| 7300                   | 150   |     | 14NAA  | 81WIL 01  | 10.6                 | 0.6   | 35  | IENA   | 78GLA 01  |
| 7300                   | 280   |     | ITNA   | 77CHA 01  | 11                   | 0.4   | 6   | PAA    | 82SEG 01  |
| 7300                   | 280   | D   | ITNA   | 78RYA 01  | 11.1                 | 1.7   |     | ITNA   | 76OND 01  |
| 7300                   | 400   |     | PAA    | 75OND 01  | 11.3                 | 0.3   |     | ITNA   | 75NAD 02  |
| 7330                   |       |     | ICPES  | 80FLO 01  | 11.3                 | 0.3   |     | ITNA   | 78NAD 02  |
| 7360                   | 344   |     | EXRF   | 78PEL 01  | 11.3                 | 0.3   | 35  | DNA    | 78GLA 01  |
| 7400                   |       |     | ITNA   | 78WEA 01  | 11.5                 | 0.5   | 35  | IENA   | 80GLA 03  |
| 7400                   | 300   |     | ITNA   | 75OND 01  | 11.5                 | 0.5   | 35  | DNA    | 81GLA 03  |
| 7400                   | 500   |     | ITNA   | 78LAU 02  | 11.7                 |       |     | DNA    | 75MIL 01  |
| 7400                   | 800   |     | AA     | 76OND 01  | 11.7                 | 2     |     | IDMS   | 78CAR 02  |
| 7500                   |       |     | EXRF   | 78WEG 01  | 11.8                 |       |     | IDMS   | 75KLE 01  |
| 7500                   |       |     | ICPES  | 80NAD 01  | 11.9                 | 0.4   | 6   | PAA    | 82SEG 01  |
| 7500                   | 500   | 35  | ITNA   | 81GLA 02  | 11.9                 | 0.6   |     | PAA    | 80SEG 01  |
| 7600                   | 200   |     | 14NAA  | 81WIL 02  | 12                   |       |     | ITNA   | 78WEA 01  |
| 7600                   | 800   |     | ITNA   | 73ABE 01  | 12                   | 0.5   |     | GAMMA  | 75OND 01  |
| 7660                   | 70    |     | PAA    | 76KAT 02  | 12                   | 0.5   |     | GAMMA  | 73ABE 01  |
| 7660                   | 100   |     | PAA    | 76KAT 03  | 12                   | 0.5   | D   | NAA    | 74OND 01  |
| 7700                   | 300   |     | XRF    | 79SMI 01  | 12.1                 | 0.8   | 13  | PAA    | 81SEG 01  |
| 8140                   |       |     | ICPES  | 84CLE 01  | 12.1                 | 2     | 35  | RTNA   | 75GLA 01  |
| 8200                   | 1100  |     | ITNA   | 81WAN 01  | 12.2                 | 0.5   | D   | NAA    | 79STE 01  |
| 8600                   | 1100  |     | EXRF   | 77GIA 01  | 12.2                 | 0.6   |     | IENA   | 77ROW 04  |
| 8700                   |       |     | AA     | 76WEW 01  | 12.2                 | 1     | 13  | PAA    | 81SEG 01  |
| 8900                   | 752   |     | ITNA   | 73SHE 01  | 12.4                 | 0.6   |     | IENA   | 77ROW 03  |
|                        |       |     |        |           | 12.7                 | 0.5   | D   | NAA    | 79STE 01  |
|                        |       |     |        |           | 12.7                 | 0.5   |     | IENA   | 76STE 05  |
|                        |       |     |        |           | 12.8                 |       |     | ITNA   | 80EDD 01  |
|                        |       |     |        |           | 13                   |       |     | SSMS   | 83WEI 02  |
|                        |       |     |        |           | 13.5                 | 1.2   |     | ITNA   | 76STE 05  |
|                        |       |     |        |           | 13.8                 |       |     | ITNA   | 75MIL 01  |
|                        |       |     |        |           | 15                   |       |     | UU     | 80HEN 01  |
|                        |       |     |        |           |                      |       |     |        |           |
| <u>Tl (ug/g)</u>       |       |     |        |           | <u>U-234 (pCi/g)</u> |       |     |        |           |
| 2                      |       |     | UU     | 80HEN 01  | 4.07                 | 0.12  | D   | NM     | 81CAS 01  |
| 3.5                    | 0.5   |     | PAA    | 80SEG 01  | 4.07                 | 0.12  |     | NM     | 80CAS 01  |
| 3.5                    | 0.5   | 6   | PAA    | 82SEG 01  |                      |       |     |        |           |
| 3.64                   | 0.34  |     | PAA    | 74CHA 01  |                      |       |     |        |           |
| 3.7                    | 0.4   |     | PAA    | 76CHA 01  |                      |       |     |        |           |
| 3.7                    | 0.4   | D   | PAA    | 77CHA 01  |                      |       |     |        |           |
| 3.8                    | 0.27  | 8   | SSMS   | 80KOP 01  |                      |       |     |        |           |
| 3.8                    | 0.5   | 6   | PAA    | 82SEG 01  |                      |       |     |        |           |
| 5                      |       |     | AA     | 76WEW 01  |                      |       |     |        |           |
| 5.3                    |       |     | POT    | 82CHR 01  |                      |       |     |        |           |
| 18                     | 6     |     | 14NAA  | 81WIL 01  |                      |       |     |        |           |
| 18                     | 6     |     | 14NAA  | 81WIL 02  |                      |       |     |        |           |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                 | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|----------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>U-235 (pCi/g)</u> |       |     |        |           | <u>V (ug/g) cont.</u> |       |     |        |           |
| 0.179                | 0.012 |     | NM     | 80CAS 01  | 237                   | 9     |     | ITNA   | 77MAE 01  |
| 0.179                | 0.012 | D   | NM     | 81CAS 01  | 237                   | 20    | D   | NAA    | 79STE 01  |
| <u>U-238 (pCi/g)</u> |       |     |        |           | 237                   | 20    |     | ITNA   | 76STE 05  |
| 4.01                 | 0.04  | D   | NM     | 81CAS 01  | 237                   | 20    |     | ITNA   | 77ROW 03  |
| 4.01                 | 0.04  |     | NM     | 80CAS 01  | 240                   |       |     | ITNA   | 75KLE 01  |
| <u>V (ug/g)</u>      |       |     |        |           | 270                   | 60    |     | ITNA   | 76OND 01  |
| 151                  |       | 6   | SSMS   | 78GUI 01  | 271                   |       | 6   | SSMS   | 78GUI 01  |
| 174                  | 55    |     | XRF    | 79SMI 01  | 290                   | 80    |     | ITNA   | 76RAG 01  |
| 182                  |       |     | XRF    | 78CAM 02  | 295                   | 156   |     | EXRF   | 77GIA 01  |
| 190                  | 50    |     | TCGS   | 79FAI 01  | 410                   |       |     | AA     | 76WEW 01  |
| 190                  | 50    | D   | TCGS   | 80AND 01  | <u>W (ug/g)</u>       |       |     |        |           |
| 196                  | 10    |     | ITNA   | 78MAC 01  | 3.8                   | 0.7   |     | ITNA   | 81WAN 01  |
| 200                  |       |     | UU     | 80HEN 01  | 3.9                   | 0.4   | D   | NAA    | 79STE 01  |
| 200                  | 34    |     | EXRF   | 78PEL 01  | 3.9                   | 0.4   |     | IENA   | 77ROW 04  |
| 201                  | 6     |     | FAA    | 76OWE 01  | 4                     | 0.4   |     | IENA   | 77ROW 03  |
| 204                  | 15    |     | ITNA   | 76BLO 01  | 4.2                   | 0.4   |     | IENA   | 76STE 05  |
| 208                  | 12    |     | PAA    | 74CHA 01  | 4.5                   | 1     | D   | ITNA   | 78RYA 01  |
| 210                  |       |     | OES    | 78SUG 01  | 4.5                   | 1     |     | ITNA   | 77CHA 01  |
| 210                  |       |     | SSMS   | 83WEI 02  | 4.6                   |       |     | ITNA   | 78WEA 01  |
| 210                  | 12    | D   | PAA    | 77CHA 01  | 4.6                   | 1.6   |     | SSMS   | 83WEI 02  |
| 210                  | 12    |     | PAA    | 76CHA 01  | 4.6                   | 1.6   |     | ITNA   | 75OND 01  |
| 214                  | 12    |     | ICPES  | 84NAD 01  | 4.8                   | 1.5   |     | ITNA   | 76OND 01  |
| 216                  |       |     | AA     | 78GUI 01  | 4.9                   | 0.7   | 35  | RENA   | 81GLA 03  |
| 216                  |       |     | EXRF   | 78WEG 01  | 5                     |       |     | UU     | 80HEN 01  |
| 219                  |       |     | ICPES  | 80NAD 01  | 5                     | 1     | 35  | IENA   | 80GLA 03  |
| 220                  | 15    | D   | ITNA   | 78RYA 01  | 5.2                   | 0.3   | 35  | RTNA   | 78GLA 02  |
| 220                  | 15    |     | ITNA   | 73ABE 01  | 5.5                   | 1.5   |     | ITNA   | 76RAG 01  |
| 220                  | 15    |     | ITNA   | 77CHA 01  | 5.8                   | 0.3   | 35  | NAA    | 81GLA 04  |
| 220                  | 20    | 35  | ITNA   | 81GLA 03  | 6                     | 1     |     | ITNA   | 78MAC 01  |
| 221                  |       |     | ITNA   | 78WEA 01  | 12.7                  | 1.1   |     | ITNA   | 73SHE 01  |
| 222                  | 3     |     | ICPES  | 84BOT 01  | <u>Y (ug/g)</u>       |       |     |        |           |
| 223                  | 9.9   |     | ITNA   | 75NAD 02  | 30                    |       |     | UU     | 80HEN 01  |
| 223                  | 10    |     | ITNA   | 78NAD 02  | 44                    | 4.2   |     | OES    | 76WEW 01  |
| 224                  | 6.7   |     | ICPES  | 81CHU 01  | 56                    |       |     | SSMS   | 83WEI 02  |
| 225                  | 9     |     | ICPES  | 85HAR 01  | 60                    | 5     |     | EXRF   | 77GIA 01  |
| 225                  | 20    |     | ITNA   | 76WEW 01  | 60                    | 8     |     | PAA    | 77CHA 01  |
| 226                  |       |     | FAA    | 78GUI 01  | 62                    | 4     |     | ICPES  | 85HAR 01  |
| 230                  | 10    |     | ITNA   | 78LAU 02  | 62                    | 10    |     | PAA    | 75OND 01  |
| 230                  | 10    | 35  | ITNA   | 81GLA 02  | 65                    |       |     | ICPES  | 80FLO 01  |
| 230                  | 10.6  |     | ITNA   | 73SHE 01  | 66                    |       |     | XRF    | 78CAM 02  |
| 230                  | 12    |     | OES    | 76WEW 01  | 66                    | 2     |     | PAA    | 76KAT 03  |
| 230                  | 30    | 35  | IENA   | 80GLA 03  | 67                    | 1     |     | PAA    | 76KAT 02  |
| 233                  |       |     | ICPES  | 80FLO 01  | 68                    | 1     |     | XRF    | 79SMI 01  |
| 234                  | 34    |     | ITNA   | 81WAN 01  | 68                    | 16    |     | SSMS   | 78SUG 02  |
| 235                  | 13    | D   | NAA    | 74OND 01  | 150                   | 7     |     | 14NAA  | 81WIL 01  |
| 235                  | 15    |     | ITNA   | 75OND 01  | 150                   | 15    |     | 14NAA  | 81WIL 02  |
| 236                  |       |     | ICPES  | 84CLE 01  |                       |       |     |        |           |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Yb (ug/g)</u> |       |     |        |           | <u>Zn (ug/g) cont.</u> |       |     |        |           |
| 4.7              | 0.4   |     | ITNA   | 78MAC 01  | 204                    | 12    | 35  | FAA    | 81GLA 03  |
| 4.8              | 0.6   |     | ITNA   | 76WEW 01  | 204                    | 13    | 5   | IENA   | 80GLA 03  |
| 5.5              | 0.3   |     | ITNA   | 78LAU 02  | 205                    | 10    | 6   | PAA    | 82SEG 01  |
| 5.5              | 1.4   |     | ITNA   | 78NAD 02  | 205                    | 20    |     | PAA    | 80SEG 01  |
| 5.53             | 0.14  |     | ITNA   | 75NAD 02  | 206                    |       |     | ICPES  | 84CLE 01  |
| 5.7              | 0.56  |     | OES    | 76WEW 01  | 206                    | 7.3   |     | ITNA   | 81WAN 01  |
| 5.7              | 0.6   |     | ITNA   | 76OND 01  | 207                    |       |     | ITNA   | 78WEA 01  |
| 5.9              | 0.3   |     | ITNA   | 76RAG 01  | 208                    |       |     | XRF    | 75KLE 01  |
| 5.9              | 0.3   |     | IENA   | 77ROW 04  | 208                    | 9.5   |     | AA     | 80STO 02  |
| 5.9              | 0.4   |     | ITNA   | 84GLA 11  | 208.1                  | 24    |     | ITNA   | 74GAL 01  |
| 6.1              | 0.18  |     | ICPES  | 81CHU 01  | 208.2                  | 3.6   |     | AA     | 77MIT 01  |
| 6.2              | 0.2   | 5   | ITNA   | 77ROW 04  | 210                    |       |     | SSMS   | 83WEI 02  |
| 6.2              | 3.4   |     | ITNA   | 73SHE 01  | 210                    |       |     | OES    | 78SUG 01  |
| 6.6              | 0.4   | D   | ITNA   | 77ROW 04  | 210                    |       |     | ICPES  | 80NAD 01  |
| 6.6              | 0.4   | D   | NAA    | 79STE 01  | 210                    | 36    |     | OES    | 76WEW 01  |
| 6.6              | 0.4   |     | ITNA   | 77ROW 03  | 211                    |       |     | ICPES  | 80EPS 03  |
| 6.77             | 0.06  |     | RTNA   | 84ODD 01  | 212                    |       |     | ICPES  | 80FLO 01  |
| 6.8              |       |     | ITNA   | 75MIL 01  | 212                    | 7     |     | XRF    | 79SMI 01  |
| 6.8              | 0.1   |     | ITNA   | 84ODD 01  | 212                    | 14    |     | ITNA   | 75NAD 02  |
| 7                |       |     | ICPES  | 80FLO 01  | 212                    | 14    |     | ITNA   | 78NAD 02  |
| 7                | 3     |     | ITNA   | 75OND 01  | 212                    | 20    |     | FAA    | 76QWE 01  |
| 7.2              | 2.1   | D   | ITNA   | 78RYA 01  | 213                    |       |     | ICPES  | 84SOB 01  |
| 7.2              | 2.1   |     | ITNA   | 77CHA 01  | 213.5                  | 1     |     | XRF    | 74GAL 01  |
| 8                |       |     | SSMS   | 83WEI 02  | 214                    |       |     | AA     | 78GEL 01  |
| 8                | 0.5   | 35  | ITNA   | 81GLA 03  | 214                    | 2     |     | AA     | 75EPS 01  |
| 8.4              | 0.6   |     | ITNA   | 81WAN 01  | 214                    | 2     |     | AF     | 75EPS 01  |
| 8.9              | 0.9   |     | ITNA   | 73ABE 01  | 214                    | 16    |     | PAA    | 74CHA 01  |
| 9                | 1.4   |     | SSMS   | 78SUG 02  | 215                    | 20    |     | PAA    | 76CHA 01  |
|                  |       |     |        |           | 215                    | 20    | D   | PAA    | 77CHA 01  |
|                  |       |     |        |           | 215                    | 20    |     | NAA    | 77JER 01  |
|                  |       |     |        |           | 216                    |       |     | FAA    | 80WAL 01  |
|                  |       |     |        |           | 216                    | 2.4   |     | AA     | 74RAI 01  |
| 180.7            | 4     |     | AA     | 74GAL 01  | 216                    | 14    |     | EXRF   | 77GIA 01  |
| 195              | 23    |     | RTNA   | 74ORV 01  | 216                    | 25    | D   | NAA    | 74OND 01  |
| 197              | 7     |     | ICPES  | 84NAD 01  | 216                    | 25    |     | PAA    | 75OND 01  |
| 198              |       |     | AA     | 78GUI 01  | 218                    | 33    |     | AA     | 82HAR 01  |
| 199              | 7     |     | ICPES  | 84BOT 01  | 219                    | 4     |     | ICPES  | 79EPS 01  |
| 200              |       |     | UU     | 80HEN 01  | 220                    | 5     |     | ITNA   | 76OND 01  |
| 200              |       |     | EXRF   | 78WEG 01  | 220                    | 10    | 6   | PAA    | 82SEG 01  |
| 200              | 8     |     | IENA   | 77ROW 04  | 220                    | 130   |     | ITNA   | 76BLO 01  |
| 200              | 10    | 9   | ITNA   | 78LAU 02  | 221                    |       |     | AA     | 79SIL 01  |
| 200              | 10    |     | EXRF   | 78PEL 01  | 221                    | 16    | 5   | IENA   | 80GLA 03  |
| 200              | 20    |     | ITNA   | 77CHA 01  | 221                    | 16    | 35  | NAA    | 81GLA 04  |
| 200              | 20    |     | ITNA   | 78LAU 02  | 228                    | 6.9   |     | ICPES  | 81CHU 01  |
| 200              | 20    | D   | ITNA   | 78RYA 01  | 230                    | 40    |     | ITNA   | 76RAG 01  |
| 200.5            | 4     |     | RTNA   | 74GAL 01  | 232                    | 9     |     | ICPES  | 85HAR 01  |
| 201              |       |     | AE+AF  | 77FEL 01  | 234                    |       |     | AA     | 78WEG 01  |
| 201              | 6     | D   | ITNA   | 77ROW 04  | 250                    |       |     | AA     | 76WEW 01  |
| 201              | 6     | D   | NAA    | 79STE 01  |                        |       |     |        |           |
| 201              | 6     |     | ITNA   | 77ROW 03  |                        |       |     |        |           |
| 201              | 8     |     | AA     | 76OND 01  |                        |       |     |        |           |
| 202              |       |     | XRF    | 78CAM 02  |                        |       |     |        |           |

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

| Conc                   | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|
| <u>Zn (ug/g) cont.</u> |       |     |        |           |
| 270                    |       | 6   | SSMS   | 78GUI 01  |
| 270                    | 30    |     | ITNA   | 78MAC 01  |
| 283                    |       | 6   | SSMS   | 78GUI 01  |
| 308                    | 75    |     | ITNA   | 76WEW 01  |
| 700                    | 220   |     | ITNA   | 73SHE 01  |
| <u>Zr (ug/g)</u>       |       |     |        |           |
| 160                    | 34    |     | OES    | 76WEW 01  |
| 182                    | 76    |     | ITNA   | 76RAG 01  |
| 200                    |       |     | UU     | 80HEN 01  |
| 223                    | 6.7   |     | ICPES  | 81CHU 01  |
| 286                    | 8     | 35  | IENA   | 81GLA 04  |
| 288                    |       |     | ICPES  | 80FLO 01  |
| 290                    | 7     |     | EXRF   | 77GIA 01  |
| 290                    | 20    | 5   | IENA   | 80GLA 03  |
| 298                    | 6     |     | PAA    | 76KAT 02  |
| 298                    | 10    |     | PAA    | 76KAT 03  |
| 300                    | 20    | D   | PAA    | 77CHA 01  |
| 300                    | 20    |     | PAA    | 76CHA 01  |
| 301                    | 20    |     | PAA    | 75OND 01  |
| 301                    | 22    |     | PAA    | 74CHA 01  |
| 305                    |       |     | XRF    | 78CAM 02  |
| 310                    | 20    |     | ITNA   | 77CHA 01  |
| 310                    | 20    | D   | ITNA   | 78RYA 01  |
| 310                    | 20    | 9   | ITNA   | 78LAU 02  |
| 310                    | 70    |     | IENA   | 77ROW 03  |
| 310                    | 70    | D   | IENA   | 77ROW 04  |
| 310                    | 70    | D   | NAA    | 79STE 01  |
| 311                    | 8     |     | XRF    | 79SMI 01  |
| 340                    | 50    | 5   | IENA   | 80GLA 03  |
| 380                    | 20    |     | 14NAA  | 81WIL 02  |
| 400                    |       |     | SSMS   | 83WEI 02  |
| 410                    |       |     | ITNA   | 77ROW 04  |
| 410                    | 20    |     | 14NAA  | 81WIL 01  |
| 500                    |       |     | ITNA   | 75MIL 01  |
| 640                    | 140   |     | ITNA   | 73SHE 01  |

TABLE 1633A-1: COMPILED DATA FOR NBS SRM 1633A TRACE ELEMENTS IN COAL FLY ASH (revised 3/1/86)

| ELE | UNITS | NBS<br>Mean ± SD | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE        | AA          |     | NAA         |      | ICPES       |     | XRF         |     | OTHER METHODS |            |
|-----|-------|------------------|----------------------------|--------|--------------|-------------|-----|-------------|------|-------------|-----|-------------|-----|---------------|------------|
|     |       |                  |                            |        |              | Mean ± SD   | (n) | Mean ± SD   | (n)  | Mean ± SD   | (n) | Mean ± SD   | (n) | Mean ± SD     | (n) Method |
| Ag  | ng/g  | ---              | < 300                      | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | ---           | ---        |
| Al  | %     | 14.3 ± 1.0       | 14.4 ± 0.7 (27)            | 14.4   | 13 - 16.5    | 14.5        | (1) | 14.1 ± 0.3  | (9)  | 14.3 ± 0.6  | (7) | 15.7 ± 1.2  | (7) | 15            | (1) CPAA   |
| Al  | %     | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 13.8          | (1) ICPMS  |
| Al  | %     | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 14.15         | (2) TCGS   |
| As  | ug/g  | 145 ± 15         | 146 ± 4 (26)               | 145    | 138.4 - 153  | 144 ± 6     | (8) | 146 ± 2     | (11) | 147 ± 9     | (3) | 149 ± 4     | (3) | 141           | (1) AE-AF  |
| As  | ug/g  | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 148           | (1) ICPMS  |
| As  | ug/g  | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 138           | (1) POL    |
| B   | ug/g  | ---              | 40.3 ± 2.1 (7)             | 39.2   | 37.9 - 44    | ---         | --- | ---         | ---  | 39          | (1) | ---         | --- | 44            | (1) OES    |
| B   | ug/g  | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 39.8 ± 1.6    | (5) TCGS   |
| Ba  | ug/g  | 1500             | 1420 ± 100 (23)            | 1440   | 1210 - 1600  | ---         | --- | 1390 ± 120  | (17) | 1490 ± 80   | (5) | 1400        | (2) | ---           | ---        |
| Be  | ug/g  | 12               | 12.8 ± 0.6 (11)            | 13     | 12 - 13.6    | 13.0        | (2) | ---         | ---  | 12.8 ± 0.6  | (7) | ---         | --- | 12            | (1) OES    |
| Be  | ug/g  | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 13            | (1) ICPMS  |
| Bi  | ug/g  | ---              | 1.26 (2)                   | ---    | 1.11 - 1.42  | 1.11        | (1) | ---         | ---  | ---         | --- | ---         | --- | 1.42          | (1) AF     |
| Br  | ug/g  | ---              | 2.3 (2)                    | ---    | 2.2 - 2.40   | ---         | --- | 2.3         | (2)  | ---         | --- | ---         | --- | ---           | ---        |
| Ca  | %     | 1.11 ± 0.01      | 1.14 ± 0.06 (27)           | 1.12   | 1.05 - 1.27  | 1.12        | (2) | 1.12 ± 0.05 | (10) | 1.10 ± 0.07 | (7) | 1.18 ± 0.07 | (7) | 1.24          | (2) TCGS   |
| Ca  | %     | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 1.1           | (1) ICPMS  |
| Cd  | ug/g  | 1.00 ± 0.15      | 1.12 ± 0.17 (9)            | 1.07   | 0.901 - 1.36 | 0.90        | (1) | ---         | ---  | 1.2         | (1) | ---         | --- | 0.95          | (1) IDMS   |
| Cd  | ug/g  | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 1.32 ± 0.04   | (3) AF     |
| Cd  | ug/g  | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 1.04          | (2) TCGS   |
| Cd  | ug/g  | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 0.96          | (1) ICPMS  |
| Ce  | ug/g  | 180              | 175 ± 7 (13)               | 174    | 163 - 186    | ---         | --- | 175 ± 7     | (13) | ---         | --- | ---         | --- | ---           | ---        |
| Cl  | ug/g  | ---              | < 69                       | ---    | ---          | ---         | --- | < 69        | ---  | ---         | --- | ---         | --- | ---           | ---        |
| Co  | ug/g  | 46               | 43 ± 3 (21)                | 44     | 37 - 47      | 45.6        | (2) | 44 ± 2      | (13) | 35          | (2) | 38          | (1) | 44.9 ± 1.0    | (3) COLOR  |
| Cr  | ug/g  | 196 ± 6          | 194 ± 7 (21)               | 192    | 185 - 210    | 196 ± 6     | (3) | 192 ± 4     | (11) | 193 ± 10    | (5) | 172         | (2) | 210           | (1) ICPMS  |
| Cs  | ug/g  | 11               | 10.5 ± 0.7 (16)            | 10.5   | 9.3 - 11.8   | ---         | --- | 10.5 ± 0.7  | (16) | ---         | --- | ---         | --- | ---           | ---        |
| Cu  | ug/g  | 118 ± 3          | 120 ± 4 (11)               | 120    | 115 - 128    | 106         | (2) | 124         | (1)  | 118 ± 2     | (5) | 115 ± 17    | (3) | 123           | (1) ICPMS  |
| Cu  | ug/g  | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 116.1         | (1) IDMS   |
| Dy  | ug/g  | ---              | 15.6 ± 1.2 (8)             | 15     | 14.3 - 17.4  | ---         | --- | 15.6 ± 1.2  | (8)  | ---         | --- | ---         | --- | ---           | ---        |
| Eu  | ug/g  | 4                | 3.7 ± 0.2 (13)             | 3.7    | 3.19 - 4.06  | ---         | --- | 3.7 ± 0.2   | (13) | ---         | --- | ---         | --- | ---           | ---        |
| F   | ug/g  | ---              | 94 ± 20 (4)                | 87     | 70 - 114     | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 100           | (2) CPAA   |
| F   | ug/g  | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 107           | (1) SSMS   |
| Fe  | %     | 9.40 ± 0.10      | 9.37 ± 0.23 (30)           | 9.38   | 8.83 - 9.70  | 9.08 ± 0.38 | (3) | 9.48 ± 0.15 | (14) | 9.35 ± 0.11 | (6) | 9.0 ± 0.4   | (5) | 9.16          | (1) ICPMS  |
| Fe  | %     | ---              | ---                        | ---    | ---          | ---         | --- | ---         | ---  | ---         | --- | ---         | --- | 9.61          | (2) TCGS   |
| Ga  | ug/g  | 58               | 56 ± 3 (9)                 | 55.7   | 51 - 62.5    | 58          | (1) | 54 ± 5      | (6)  | ---         | --- | 57 ± 5      | (3) | ---           | ---        |
| Gd  | ug/g  | ---              | 19 ± 4 (6)                 | 17     | 15.3 - 25    | ---         | --- | 25          | (1)  | ---         | --- | ---         | --- | 18 ± 3        | (5) TCGS   |
| Ge  | ug/g  | ---              | 33.9 ± 0.2 (5)             | 34     | 33.5 - 34    | ---         | --- | ---         | ---  | 33.8        | (1) | 34          | (3) | 33.5          | (1) COLOR  |

TABLE 1633A-1: COMPILED DATA FOR NBS SRM 1633A TRACE ELEMENTS IN COAL FLY ASH (cont.)

| ELE    | UNITS | NBS         |      | CONSENSUS   |      | MEDIAN | RANGE       | AA          |     | NAA         |      | ICPES       |     | XRF         |       | OTHER METHODS |           |
|--------|-------|-------------|------|-------------|------|--------|-------------|-------------|-----|-------------|------|-------------|-----|-------------|-------|---------------|-----------|
|        |       | Mean ± SD   | (n)  | Mean ± SD   | (n)  |        |             | Mean ± SD   | (n) | Mean ± SD   | (n)  | Mean ± SD   | (n) | Mean ± SD   | (n)   | Mean ± SD     | (n)       |
| H2O-   | %     | ---         | (1)  | 0.35        | (1)  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | ---   | 0.35          | (1) FD    |
| Hf     | ug/g  | 8           | (13) | 7.4 ± 0.3   | (13) | 7.31   | 6.6 - 7.80  | ---         | --- | 7.4 ± 0.3   | (13) | ---         | --- | ---         | ---   | ---           | ---       |
| Hg     | ng/g  | 160 ± 10    | (3)  | 164 ± 24    | (3)  | 151    | 150 - 192   | 150         | (2) | ---         | ---  | ---         | --- | ---         | ---   | 192           | (1) ICPMS |
| Mo     | ug/g  | ---         | (1)  | 2.9         | (1)  | ---    | ---         | ---         | --- | 2.9         | (1)  | ---         | --- | ---         | ---   | ---           | ---       |
| I      | ug/g  | ---         | ---  | < 4.5       | ---  | ---    | ---         | ---         | --- | < 4.5       | ---  | ---         | --- | ---         | ---   | ---           | ---       |
| In     | ng/g  | ---         | (4)  | 158 ± 5     | (4)  | 160    | 151 - 160   | 160         | (1) | 157 ± 5     | (3)  | ---         | --- | ---         | ---   | ---           | ---       |
| K      | %     | 1.88 ± 0.06 | (23) | 1.88 ± 0.05 | (23) | 1.86   | 1.77 - 1.99 | 1.91 ± 0.06 | (3) | 1.85 ± 0.04 | (9)  | 1.89 ± 0.14 | (5) | 1.83 ± 0.08 | (5)   | 1.96          | (2) TCGS  |
| K      | %     | ---         | ---  | ---         | ---  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | ---   | 1.85          | (1) ICPMS |
| K-40   | pCi/g | ---         | (1)  | 13.9        | (1)  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | 13.9  | (1) GAMMA     |           |
| La     | ug/g  | ---         | (15) | 84 ± 8      | (15) | 83.8   | 66 - 100    | ---         | (1) | 84 ± 8      | (14) | 93          | (1) | ---         | ---   | ---           |           |
| Li     | ug/g  | ---         | (4)  | 165 ± 50    | (4)  | 151    | 100 - 221   | ---         | (2) | ---         | (2)  | 169         | (2) | ---         | 100   | (1) OES       |           |
| Li     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | 221   | (1) CPAA      |           |
| Lu     | ug/g  | ---         | (8)  | 1.12 ± 0.18 | (8)  | 1.04   | 0.93 - 1.44 | ---         | (8) | 1.12 ± 0.18 | (8)  | ---         | --- | ---         | ---   | ---           |           |
| Mg     | ug/g  | 550 ± 100   | (14) | 4570 ± 450  | (14) | 4600   | 3800 - 5700 | 4395        | (2) | 5500 ± 900  | (3)  | 4680 ± 110  | (6) | 3800        | (1)   | 4440          | (1) ICPMS |
| Mg     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | 4800  | (1) CPAA      |           |
| Mn     | ug/g  | 179 ± 8     | (21) | 188 ± 15    | (21) | 188    | 167 - 230   | 167         | (1) | 191 ± 25    | (11) | 191 ± 20    | (6) | 198         | (2)   | 190           | (1) TCGS  |
| Mn     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | ---   | 206           | (1) ICPMS |
| Mo     | ug/g  | 29          | (8)  | 30 ± 3      | (8)  | 29.2   | 26 - 36     | ---         | (4) | 31 ± 4      | (4)  | 32          | (1) | 28          | (2)   | 29.2          | (1) ICPMS |
| Na     | ug/g  | 1700 ± 100  | (22) | 1730 ± 110  | (22) | 1750   | 1484 - 2020 | 1580        | (2) | 1750 ± 60   | (12) | 1700 ± 130  | (5) | 2200        | (1)   | 1670          | (1) ICPMS |
| Na     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | ---   | 1769          | (1) CPAA  |
| Na     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | 2100  | (1) TCGS      |           |
| Nb     | ug/g  | ---         | (2)  | 28          | (2)  | ---    | 24 - 31.5   | ---         | --- | ---         | ---  | ---         | 28  | (2)         | ---   | ---           |           |
| Nd     | ug/g  | ---         | (5)  | 74 ± 10     | (5)  | 77.3   | 65.6 - 89   | ---         | (3) | 79 ± 9      | (3)  | ---         | --- | ---         | 65.8  | (2) TCGS      |           |
| Ni     | ug/g  | 127 ± 4     | (16) | 124 ± 13    | (16) | 127    | 97 - 140    | 134         | (1) | 120 ± 18    | (4)  | 130 ± 9     | (4) | 111 ± 17    | (5)   | 124           | (1) VOLT  |
| Ni     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | 132   | (1) ICPMS     |           |
| Ni     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | 133   | (1) COLOR     |           |
| O      | %     | ---         | (1)  | 47.66       | (1)  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | 47.66 | (1) 14NAA     |           |
| P      | ug/g  | ---         | (7)  | 1690 ± 240  | (7)  | 1744   | 1320 - 2000 | 2000        | (1) | ---         | (4)  | 1570 ± 240  | (4) | 1700        | (1)   | 1840          | (1) ICPMS |
| Pb     | ug/g  | 72.4 ± 0.4  | (13) | 72 ± 4      | (13) | 72     | 64 - 75.9   | 72.4        | (1) | ---         | (4)  | 68 ± 8      | (4) | 73 ± 4      | (6)   | 72            | (1) POT   |
| Pb     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | 71.8  | (1) IDMS      |           |
| Pb     | ug/g  | ---         | (2)  | ---         | (2)  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | 70.4  | (1) ICPMS     |           |
| Pb-210 | pCi/g | ---         | ---  | 3.65        | (2)  | ---    | 3.4 - 3.9   | ---         | --- | ---         | ---  | ---         | --- | ---         | 3.9   | (1) NM        |           |
| Pb-210 | pCi/g | ---         | (1)  | ---         | (1)  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | 3.4   | (1) GAMMA     |           |
| Po-210 | pCi/g | ---         | (2)  | ---         | (2)  | ---    | ---         | ---         | (2) | ---         | ---  | ---         | --- | ---         | 3.75  | (1) RAS       |           |
| Pr     | ug/g  | ---         | (1)  | 18.4        | (1)  | ---    | 17.9 - 18.9 | ---         | (2) | 18.4        | (2)  | ---         | --- | ---         | ---   | ---           |           |
| Ra-226 | pCi/g | ---         | (1)  | 3.2         | (1)  | ---    | ---         | ---         | --- | ---         | ---  | ---         | --- | ---         | ---   | ---           |           |
| Rb     | ug/g  | 131 ± 2     | (13) | 138 ± 11    | (13) | 136    | 121 - 163   | ---         | (9) | 142 ± 15    | (9)  | ---         | --- | 136 ± 10    | (5)   | 3.2           | (1) GAMMA |

TABLE 1633A-1: COMPILED DATA FOR NBS SRM 1633A TRACE ELEMENTS IN COAL FLY ASH (cont.)

| ELE           | UNITS | NBS<br>Mean ± SD | CONSENSUS  |      | MEDIAN | RANGE       | AA         |     | NAA        |      | ICPES      |      | XRF        |            | OTHER METHODS |       |        |
|---------------|-------|------------------|------------|------|--------|-------------|------------|-----|------------|------|------------|------|------------|------------|---------------|-------|--------|
|               |       |                  | Mean ± SD  | (n)  |        |             | Mean ± SD  | (n) | Mean ± SD  | (n)  | Mean ± SD  | (n)  | Mean ± SD  | (n)        | Mean ± SD     | (n)   | Method |
| S             | ug/g  | 1800             | 1900 ± 700 | (4)  | 1350   | 1200 - 2700 | ---        | --- | ---        | 1200 | (1)        | 2300 | (1)        | 1350       | (1)           | ICPMS |        |
| S             | ug/g  | ---              | ---        | ---  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 2700       | (1)           | TCGS  |        |
| S-32/34 ratio |       | ---              | 22.641     | (1)  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 22.641     | (1)           | IDMS  |        |
| S-33/34 ratio |       | ---              | 0.1781     | (1)  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 0.1781     | (1)           | IDMS  |        |
| Sb            | ug/g  | 6.8 ± 0.4        | 6.9 ± 0.5  | (14) | 6.88   | 6.3 - 7.8   | 7.3 ± 1.4  | (3) | 7.0 ± 0.5  | (11) | ---        | ---  | ---        | 6.88       | (1)           | ICPMS |        |
| Sb            | ug/g  | ---              | ---        | ---  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 4.8        | (1)           | AF    |        |
| Sc            | ug/g  | 40               | 39 ± 3     | (14) | 39     | 34 - 43     | ---        | --- | 39.5 ± 1.9 | (11) | 40.3       | (1)  | 34         | (1)        | ---           |       |        |
| Se            | ug/g  | 10.3 ± 0.6       | 10.0 ± 1.7 | (18) | 10     | 6.2 - 13    | 10.4 ± 0.5 | (3) | 10.5 ± 1.5 | (8)  | 10.5       | (2)  | 7.8 ± 1.2  | (4)        | 6.2           | (1)   | AF     |
| Se            | ug/g  | ---              | ---        | ---  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 12         | (1)           | ICPMS |        |
| Si            | %     | 22.8 ± 0.8       | 23.0 ± 0.9 | (15) | 23     | 21 - 24.2   | 24.05      | (2) | 23.9       | (1)  | 23.5 ± 0.4 | (4)  | 22.4 ± 1.0 | (6)        | 21.6          | (2)   | TCGS   |
| Si            | %     | ---              | ---        | ---  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 22.16      | (1)           | ICPMS |        |
| Sm            | ug/g  | ---              | 17.0 ± 1.5 | (16) | 16.7   | 14.5 - 20   | ---        | --- | 17.5 ± 1.9 | (13) | ---        | ---  | ---        | 16.3 ± 0.4 | (4)           | TCGS  |        |
| Sn            | ug/g  | ---              | 10 ± 6     | (5)  | 6.36   | 3.96 - 18.5 | 6.33       | (2) | ---        | ---  | 18.5       | (1)  | ---        | 14.8       | (1)           | AF    |        |
| Sn            | ug/g  | ---              | ---        | ---  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 3.96       | (1)           | ICPMS |        |
| Sr            | ug/g  | 830 ± 30         | 810 ± 40   | (20) | 815    | 740 - 890   | ---        | --- | 805 ± 37   | (12) | 790 ± 50   | (4)  | 840 ± 60   | (5)        | ---           |       |        |
| Ta            | ug/g  | ---              | 2.0 ± 0.2  | (12) | 1.94   | 1.71 - 2.30 | ---        | --- | 2.0 ± 0.2  | (12) | ---        | ---  | ---        | ---        | ---           |       |        |
| Tb            | ug/g  | ---              | 2.5 ± 0.3  | (9)  | 2.5    | 2.1 - 2.9   | ---        | --- | 2.5 ± 0.3  | (9)  | ---        | ---  | ---        | ---        | ---           |       |        |
| Te            | ug/g  | ---              | < 3.5      | ---  | ---    | ---         | ---        | --- | < 3.5      | ---  | ---        | ---  | ---        | ---        | ---           |       |        |
| Th            | ug/g  | 24.7 ± 0.3       | 25.1 ± 1.4 | (18) | 24.8   | 22.4 - 28   | ---        | --- | 25.0 ± 0.6 | (14) | ---        | ---  | 25 ± 6     | (3)        | 23.2          | (1)   | ICPMS  |
| Th-232        | pCi/g | ---              | 2.4        | (1)  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 2.4        | (1)           | GAMMA |        |
| Ti            | ug/g  | 8000             | 8230 ± 390 | (25) | 8100   | 7400 - 9000 | 9000       | (1) | 8200 ± 400 | (11) | 7900 ± 600 | (6)  | 7700 ± 800 | (7)        | 8500          | (2)   | TCGS   |
| Ti            | ug/g  | ---              | ---        | ---  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 8000       | (1)           | ICPMS |        |
| Tl            | ug/g  | 5.7 ± 0.2        | 5.3 ± 0.8  | (3)  | 5.7    | 4.4 - 5.7   | ---        | --- | 5.7        | (1)  | ---        | ---  | 4.4        | (1)        | 5.7           | (1)   | ICPMS  |
| Tm            | ug/g  | ---              | 2.4        | (1)  | ---    | ---         | ---        | --- | 2.4        | (1)  | ---        | ---  | ---        | ---        | ---           |       |        |
| U             | ug/g  | 10.2 ± 0.1       | 10.3 ± 0.3 | (21) | 10.3   | 9.66 - 11   | ---        | --- | 10.2 ± 0.3 | (18) | ---        | ---  | 11         | (1)        | 10.2          | (1)   | FLUOR  |
| U             | ug/g  | ---              | ---        | ---  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | ---        | 10.2          | (1)   | ICPMS  |
| U-238         | pCi/g | ---              | 3.6        | (1)  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 3.6        | (1)           | GAMMA |        |
| V             | ug/g  | 297 ± 6          | 294 ± 18   | (18) | 290    | 271 - 344   | ---        | --- | 289 ± 8    | (9)  | 290 ± 13   | (6)  | 243        | (2)        | 324           | (1)   | ICPMS  |
| V             | ug/g  | ---              | ---        | ---  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 360        | (1)           | TCGS  |        |
| W             | ug/g  | ---              | 5.7 ± 0.7  | (7)  | 5.4    | 4.71 - 6.9  | ---        | --- | 5.7 ± 0.7  | (7)  | ---        | ---  | ---        | ---        | ---           |       |        |
| Y             | ug/g  | ---              | 82 ± 6     | (4)  | 82     | 74 - 89     | ---        | --- | ---        | ---  | 89         | (1)  | 85 ± 12    | (4)        | ---           |       |        |
| Yb            | ug/g  | ---              | 7.4 ± 0.7  | (8)  | 7.5    | 6.02 - 8.3  | ---        | --- | 7.4 ± 0.7  | (8)  | ---        | ---  | ---        | ---        | ---           |       |        |
| Zn            | ug/g  | 220 ± 10         | 226 ± 22   | (22) | 226    | 189 - 263   | 228        | (2) | 240 ± 17   | (5)  | 226 ± 20   | (6)  | 231 ± 23   | (5)        | 192 ± 4       | (3)   | AF     |
| Zn            | ug/g  | ---              | ---        | ---  | ---    | ---         | ---        | --- | ---        | ---  | ---        | ---  | ---        | 230        | (1)           | ICPMS |        |
| Zr            | ug/g  | ---              | 330 ± 80   | (6)  | 300    | 220 - 410   | ---        | --- | 370 ± 50   | (4)  | ---        | ---  | 241        | (2)        | ---           |       |        |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (revised 3/1/86)

| Conc             | Uncer | Com  | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|------|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ag (ug/g)</u> |       |      |        |           | <u>As (ug/g) cont.</u> |       |     |        |           |
| <                | 0.3   |      | ITNA   | 85GAU 04  | 145                    |       | 11  | FAA    | 83XIA 01  |
| <                | 0.6   | L    | IENA   | 80GLA 03  | 145                    |       |     | HAA    | 84YAM 01  |
| <                | 1.1   | L    | ITNA   | 82SUZ 02  | 145                    | 6     |     | ITNA   | 82SUZ 02  |
|                  |       |      |        |           | 145                    | 8     |     | CPXRF  | 84AHL 01  |
|                  |       |      |        |           | 145                    | 8     | 35  | VV     | 81GLA 04  |
|                  |       |      |        |           | 145                    | 11    |     | IENA   | 82GLA 02  |
|                  |       |      |        |           | 145                    | 15    |     | ITNA   | 84SIL 01  |
|                  |       |      |        |           | 145.3                  | 8.1   |     | ITNA   | 83OBR 01  |
|                  |       |      |        |           | 146                    | 2     |     | ITNA   | 85VOG 01  |
|                  |       |      |        |           | 147                    |       |     | HAA    | 84TER 04  |
|                  |       |      |        |           | 147                    | 15    |     | ITNA   | 85FIL 01  |
|                  |       | D    | TCGS   | 80AND 01  | 148                    | 3     | 35  | IENA   | 80GLA 03  |
|                  |       |      | ITNA   | 85VOG 01  | 148                    | 5     |     | ICPMS  | 86SCI 02  |
|                  |       |      | ICPES  | 84BOT 01  | 149                    | 3     |     | ITNA   | 85SUN 01  |
|                  |       |      | ITNA   | 85SUN 01  | 150                    |       | 11  | HAA    | 82CRO 03  |
|                  |       |      | ITNA   | 80GAR 01  | 151                    |       | 6   | EXRF   | 84JEN 01  |
|                  |       | 35   | ITNA   | 81GLA 02  | 152                    |       | 6   | EXRF   | 84JEN 01  |
|                  |       | 35   | ITNA   | 81GLA 04  | 153                    |       | 11  | FAA    | 83XIA 01  |
|                  |       | 11   | ICPES  | 85SAT 01  | 157                    | 11    | 13  | ICPES  | 84BOT 01  |
|                  |       |      | TCGS   | 85VOG 01  |                        |       |     |        |           |
|                  |       |      | ICPES  | 85HAR 01  | <u>B (ug/g)</u>        |       |     |        |           |
|                  |       | 11   | ICPES  | 85SAT 01  | 37.9                   | 1.7   |     | TCGS   | 85VOG 01  |
|                  |       |      | AA     | 82NAD 02  | 39                     | 1     |     | ICPES  | 82OWE 01  |
|                  |       |      | ITNA   | 82SUZ 02  | 39                     | 3     | 35  | TCGS   | 81GLA 04  |
|                  |       | 16   | EXRF   | 82PEL 01  | 39.2                   | 0.7   | D   | TCGS   | 80AND 01  |
|                  |       | 16   | EXRF   | 82PEL 01  | 39.2                   | 0.7   |     | TCGS   | 79FAI 01  |
|                  |       |      | ICPES  | 82NAD 02  | 41                     |       |     | TCGS   | 84HIG 01  |
|                  |       |      | ICPES  | 85PEA 01  | 42                     | 4     |     | TCGS   | 84GLA 01  |
|                  |       |      | CPAA   | 83BIR 01  | 44                     |       |     | OES    | 83MIL 01  |
|                  |       | 0.43 | CPXRF  | 80KIR 01  |                        |       |     |        |           |
|                  |       | 1.1  | CPXRF  | 84AHL 01  | <u>Ba (ug/g)</u>       |       |     |        |           |
|                  |       | 0.2  | EXRF   | 82PEL 01  | 1060                   |       |     | ITNA   | 82GLA 02  |
|                  |       | 1.5  | ITNA   | 85FIL 01  | 1100                   | 100   | 9   | ITNA   | 82SUZ 02  |
|                  |       |      | EXRF   | 84JEN 01  | 1210                   | 50    | 9   | ITNA   | 82SUZ 02  |
|                  |       | 6    | EXRF   | 84JEN 01  | 1240                   | 200   | 5   | IENA   | 80GLA 03  |
|                  |       | 6    | EXRF   | 84JEN 01  | 1300                   | 90    |     | ITNA   | 84SUZ 02  |
|                  |       |      | ICPES  | 85NAR 02  | 1300                   | 100   |     | CPXRF  | 84AHL 01  |
|                  |       |      | AF     | 85NAR 02  | 1333                   | 100   | 17  | ITNA   | 84KYL 01  |
|                  |       | 13   | ICPES  | 84NAD 01  | 1339                   | 177   |     | ITNA   | 85SUN 01  |
|                  |       | 18   | CPXRF  | 80KIR 01  | 1400                   | 20    | 5   | IENA   | 80GLA 03  |
|                  |       |      | HAA    | 82CRO 03  | 1400                   | 100   |     | ICPES  | 84NAD 01  |
|                  |       | 11   | HAA    | 85YAM 01  | 1400                   | 360   |     | ITNA   | 85FIL 01  |
|                  |       | 5    | HAA    | 85YAM 01  | 1430                   | 25    | 11  | ICPES  | 85SAT 01  |
|                  |       | 8.8  | POL    | 83ELK 01  | 1440                   | 36    |     | ITNA   | 83OBR 01  |
|                  |       |      | ICPES  | 84LIV 01  | 1450                   | 110   | 35  | NAA    | 81GLA 04  |
|                  |       | 1    | ICPES  | 84LIV 01  | 1471                   | 70    | 17  | ITNA   | 84KYL 01  |
|                  |       | 8    | AE-AF  | 82MAT 01  | 1480                   | 30    |     | ICPES  | 85HAR 01  |
|                  |       |      | ITNA   | 81SLO 01  | 1490                   | 80    |     | ITNA   | 84GLA 02  |
|                  |       |      | RTNA   | 81SLO 01  | 1500                   | 90    |     | ITNA   | 80GAR 01  |
|                  |       |      | FAA    | 84SIL 01  |                        |       |     |        |           |
|                  |       | 8    | FAA    | 84SIL 01  |                        |       |     |        |           |
|                  |       | 12   | ICPES  | 84BOT 01  |                        |       |     |        |           |
|                  |       | 13   | ICPES  | 84BOT 01  |                        |       |     |        |           |
|                  |       |      | ICPES  | 84BOT 01  |                        |       |     |        |           |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Ba (ug/g) cont.</u> |       |     |        |           | <u>Ca (%) cont.</u> |       |     |        |           |
| 1500                   | 100   |     | ITNA   | 85VOG 01  | 1.11                | 0.076 |     | ITNA   | 83OBR 01  |
| 1500                   | 100   |     | CPXRF  | 80KIR 01  | 1.12                | 0.01  | 11  | ICPES  | 85SAT 01  |
| 1500                   | 200   | 35  | ITNA   | 81GLA 02  | 1.12                | 0.01  | 11  | ICPES  | 85SAT 01  |
| 1520                   | 20    | 5   | IENA   | 80GLA 03  | 1.12                | 0.07  |     | ITNA   | 85VOG 01  |
| 1540                   | 30    |     | ICPES  | 84BOT 01  | 1.12                | 0.08  |     | ITNA   | 80GAR 01  |
| 1600                   |       |     | ICPES  | 82NAD 02  | 1.13                | 0.02  | 16  | EXRF   | 82PEL 01  |
| 1760                   | 300   | 5   | IENA   | 80GLA 03  | 1.13                | 0.12  |     | ITNA   | 85SUN 01  |
| 2350                   |       | 6   | EXRF   | 84JEN 01  | 1.14                | 0.02  | 16  | EXRF   | 82PEL 01  |
| 2370                   |       | 6   | EXRF   | 84JEN 01  | 1.14                | 0.02  | 16  | EXRF   | 82PEL 01  |
|                        |       |     |        |           | 1.14                | 0.04  |     | AA     | 82GLA 02  |
|                        |       |     |        |           | 1.16                | 0.21  |     | ITNA   | 82SUZ 02  |
|                        |       |     |        |           | 1.2                 | 0.08  |     | CPXRF  | 80KIR 01  |
|                        |       |     |        |           | 1.2                 | 0.2   |     | TCGS   | 85VOG 01  |
|                        |       |     |        |           | 1.2155              |       |     | ICPES  | 85PEA 01  |
|                        |       |     |        |           | 1.23                | 0.16  |     | ITNA   | 85FIL 01  |
|                        |       |     |        |           | 1.27                |       | 6   | EXRF   | 84JEN 01  |
|                        |       |     |        |           | 1.27                |       | 6   | EXRF   | 84JEN 01  |
|                        |       |     |        |           | 1.29                |       |     | ITNA   | 85GAU 04  |
|                        |       |     |        |           | 1.29                | 0.11  | D   | TCGS   | 80AND 01  |
|                        |       |     |        |           | 1.29                | 0.11  |     | TCGS   | 79FAI 01  |
|                        |       |     |        |           | <u>Cd (ug/g)</u>    |       |     |        |           |
|                        |       |     |        |           | 0.901               |       |     | AA     | 84TER 01  |
|                        |       |     |        |           | 0.95                | 0.05  |     | IDMS   | 84BRO 03  |
|                        |       |     |        |           | 0.96                | 0.06  |     | ICPMS  | 86SCI 02  |
|                        |       |     |        |           | 1.01                | 0.13  |     | TCGS   | 85VOG 01  |
|                        |       |     |        |           | 1.07                | 0.05  | D   | TCGS   | 80AND 01  |
|                        |       |     |        |           | 1.07                | 0.05  |     | TCGS   | 79FAI 01  |
|                        |       |     |        |           | 1.2                 | 0.6   | 13  | ICPES  | 84BOT 01  |
|                        |       |     |        |           | 1.28                |       | 6   | AF     | 84NAR 02  |
|                        |       |     |        |           | 1.31                |       |     | AF     | 85NAR 02  |
|                        |       |     |        |           | 1.36                |       | 6   | AF     | 84NAR 02  |
|                        |       |     |        |           | 3.1                 |       |     | ICPES  | 85NAR 02  |
|                        |       |     |        |           | 7.4                 | 3.3   | 13  | ICPES  | 84BOT 01  |
|                        |       |     |        |           | <u>Ce (ug/g)</u>    |       |     |        |           |
|                        |       |     |        |           | 163                 | 6     |     | ITNA   | 82GLA 02  |
|                        |       |     |        |           | 167                 | 8     | 12  | ITNA   | 82SUZ 02  |
|                        |       |     |        |           | 170                 | 6     |     | ITNA   | 84SUZ 02  |
|                        |       |     |        |           | 170                 | 6     | 35  | ITNA   | 81GLA 02  |
|                        |       |     |        |           | 172.1               | 1     | 17  | ITNA   | 84KYL 01  |
|                        |       |     |        |           | 173.1               | 3.2   | 17  | ITNA   | 84KYL 01  |
|                        |       |     |        |           | 174                 | 5     | 12  | ITNA   | 82SUZ 02  |
|                        |       |     |        |           | 175                 | 4     |     | ITNA   | 85SUN 01  |
|                        |       |     |        |           | 180                 | 5     | 35  | NAA    | 81GLA 04  |
|                        |       |     |        |           | 180                 | 20    |     | ITNA   | 85FIL 01  |
|                        |       |     |        |           | 183                 | 19    |     | ITNA   | 80GAR 01  |
|                        |       |     |        |           | 185                 | 5     |     | ITNA   | 85VOG 01  |
|                        |       |     |        |           | 186                 | 4     | 35  | IENA   | 80GLA 03  |
|                        |       |     |        |           | 230                 | 45    |     | CPXRF  | 80KIR 01  |
| <u>Ca (%)</u>          |       |     |        |           |                     |       |     |        |           |
| 0.025                  | 0.002 |     | AA     | 82HAR 01  |                     |       |     |        |           |
| 0.99                   | 0.09  |     | ICPES  | 84NAD 01  |                     |       |     |        |           |
| 1.05                   | 0.16  | 35  | ITNA   | 81GLA 02  |                     |       |     |        |           |
| 1.08                   | 0.02  |     | ICPES  | 84BOT 01  |                     |       |     |        |           |
| 1.08                   | 0.06  |     | CPXRF  | 84AHL 01  |                     |       |     |        |           |
| 1.09                   | 0.01  |     | AA     | 82NAD 02  |                     |       |     |        |           |
| 1.09                   | 0.02  |     | ICPES  | 85HAR 01  |                     |       |     |        |           |
| 1.1                    | 0.08  |     | ICPMS  | 86SCI 02  |                     |       |     |        |           |
| 1.1                    | 0.1   | 35  | ITNA   | 81GLA 04  |                     |       |     |        |           |
| 1.1                    | 0.3   | 35  | IENA   | 80GLA 03  |                     |       |     |        |           |
| 1.11                   | 0.03  |     | ICPES  | 82NAD 02  |                     |       |     |        |           |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Cl (ug/g)</u> |       |     |        |           | <u>Cs (ug/g)</u> |       |     |        |           |
| <                | 69    | L   | ITNA   | 82SUZ 02  | 9.3              | 0.5   |     | ITNA   | 82GLA 02  |
|                  |       |     |        |           | 9.6              | 0.6   | 17  | ITNA   | 84KYL 01  |
|                  |       |     |        |           | 9.7              | 0.6   | 35  | ITNA   | 81GLA 02  |
| <u>Co (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 33               | 2     |     | ICPES  | 85HAR 01  | 9.9              | 0.6   |     | ITNA   | 84GLA 11  |
| 37               | 1     |     | ICPES  | 84BOT 01  | 9.9              | 0.9   |     | ITNA   | 84GLA 02  |
| 37               | 3     | 35  | IENA   | 80GLA 03  | 10.1             | 0.2   | 35  | IENA   | 80GLA 03  |
| 38               | 13    |     | CPXRF  | 80KIR 01  | 10.2             | 0.2   |     | ITNA   | 82SUZ 02  |
| 39               | 2     |     | ITNA   | 85FIL 01  | 10.5             | 0.3   | 35  | NAA    | 81GLA 04  |
| 40               |       |     | ITNA   | 82GLA 02  | 10.6             | 1.1   |     | ITNA   | 80GAR 01  |
| 42.8             | 0.8   | 17  | ITNA   | 84KYL 01  | 10.7             | 0.6   | 17  | ITNA   | 84KYL 01  |
| 43.3             | 1     | 17  | ITNA   | 84KYL 01  | 10.8             | 0.3   |     | ITNA   | 86GAU 01  |
| 43.5             | 1.6   |     | ITNA   | 84GLA 11  | 11               | 1.1   |     | ITNA   | 85FIL 01  |
| 43.9             | 0.55  |     | COLOR  | 85KAT 01  | 11.1             | 1.2   |     | ITNA   | 85GAU 04  |
| 44               | 1     | 35  | ITNA   | 81GLA 02  | 11.2             | 0.5   |     | ITNA   | 85VOG 01  |
| 44               | 1     |     | ITNA   | 82SUZ 02  | 11.3             | 0.5   |     | ITNA   | 85SUN 01  |
| 44.2             | 1.55  |     | AA     | 85KAT 01  | 11.8             | 3.2   |     | ITNA   | 84SUZ 02  |
| 44.8             | 0.8   |     | ITNA   | 84GLA 02  |                  |       |     |        |           |
| 44.8             | 1     | 12  | COLOR  | 83KAT 02  | <u>Cu (ug/g)</u> |       |     |        |           |
| 45               | 2     |     | ITNA   | 84SUZ 02  | 96               | 7     |     | CPXRF  | 84AHL 01  |
| 45.9             | 0.7   |     | ITNA   | 85VOG 01  | 96.6             | 10.7  |     | AA     | 84KAN 01  |
| 46               | 1.36  | 12  | COLOR  | 83KAT 02  | 115              | 1     | 11  | ICPES  | 85SAT 01  |
| 46               | 1.5   |     | ITNA   | 85SUN 01  | 116              | 4     |     | AA     | 82HAR 01  |
| 46.2             | 1.8   |     | ITNA   | 80GAR 01  | 116              | 7     |     | ICPES  | 84NAD 01  |
| 47               | 4     | 35  | NAA    | 81GLA 04  | 116.1            | 0.8   |     | IDMS   | 84BRO 03  |
| 47               | 11    |     | AA     | 82HAR 01  | 120              |       | 11  | ICPES  | 85SAT 01  |
|                  |       |     |        |           | 120              | 2     |     | ICPES  | 85HAR 01  |
|                  |       |     |        |           | 120              | 4     |     | ICPES  | 84BOT 01  |
| <u>Cr (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 129              | 2     |     | ICPES  | 84NAD 01  | 120              | 5.2   |     | CPXRF  | 80KIR 01  |
| 145              | 44    |     | CPXRF  | 84AHL 01  | 123              | 4     |     | ICPMS  | 86SCI 02  |
| 185              | 7     | 12  | ITNA   | 82SUZ 02  | 124              | 33    |     | ITNA   | 84SUZ 02  |
| 186              | 6     |     | ICPES  | 85HAR 01  | 128              | 4     |     | WXRF   | 84KYL 01  |
| 186              | 8     | 35  | ITNA   | 81GLA 02  | 186              |       | 6   | EXRF   | 84JEN 01  |
| 187              | 8     |     | ICPES  | 84BOT 01  | 188              |       | 6   | EXRF   | 84JEN 01  |
| 189              | 3     | 11  | ICPES  | 85SAT 01  |                  |       |     |        |           |
| 190              | 1.5   | 11  | AA     | 84KAM 01  | <u>Dy (ug/g)</u> |       |     |        |           |
| 190              | 6     |     | ITNA   | 85SUN 01  | 14.3             | 0.2   | 35  | ITNA   | 81GLA 02  |
| 190              | 8     |     | ITNA   | 85FIL 01  | 14.5             |       | 35  | ITNA   | 81GLA 04  |
| 191              | 13    |     | ITNA   | 82GLA 02  | 15               | 0.9   |     | ITNA   | 85SUN 01  |
| 192              |       |     | ICPES  | 81WAL 01  | 15               | 3.3   |     | ITNA   | 83OBR 01  |
| 193              | 14    |     | ITNA   | 84SUZ 02  | 16.6             | 1.3   |     | ITNA   | 80GAR 01  |
| 194              | 6     | 12  | ITNA   | 82SUZ 02  | 16.8             | 0.3   |     | ITNA   | 82SUZ 02  |
| 195              | 7     |     | ITNA   | 84GLA 02  | 17.4             | 0.5   |     | ITNA   | 84SUZ 02  |
| 196              | 8     | 11  | AA     | 84KAM 01  |                  |       |     |        |           |
| 197              | 13    |     | ITNA   | 80GAR 01  |                  |       |     |        |           |
| 197              | 18    | 35  | ITNA   | 81GLA 04  |                  |       |     |        |           |
| 198              | 1     |     | ITNA   | 85VOG 01  |                  |       |     |        |           |
| 200              | 11    |     | CPXRF  | 80KIR 01  |                  |       |     |        |           |
| 202              | 16    |     | AA     | 82HAR 01  |                  |       |     |        |           |
| 210              |       | 11  | ICPES  | 85SAT 01  |                  |       |     |        |           |
| 210              | 8     |     | ICPMS  | 86SCI 02  |                  |       |     |        |           |
| 482              |       | 6   | EXRF   | 84JEN 01  |                  |       |     |        |           |
| 486              |       | 6   | EXRF   | 84JEN 01  |                  |       |     |        |           |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

| Conc             | Uncer  | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|------------------|--------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Eu (ug/g)</u> |        |     |        |           | <u>Fe (%) cont.</u> |       |     |        |           |
| 2                | 2      | 35  | IENA   | 80GLA 03  | 9.51                | 0.61  |     | AA     | 82HAR 01  |
| 2.98             | 0.33   |     | ITNA   | 80GAR 01  | 9.52                | 0.34  |     | TCGS   | 85VOG 01  |
| 3.19             | 0.08   | 35  | ITNA   | 81GLA 02  | 9.53                | 0.08  | 11  | ICPES  | 85SAT 01  |
| 3.6              | 0.1    |     | ITNA   | 84GLA 02  | 9.58                | 0.22  |     | ITNA   | 85SUN 01  |
| 3.62             | 0.04   | 17  | ITNA   | 84KYL 01  | 9.62                | 0.1   |     | ITNA   | 85GAU 04  |
| 3.64             | 0.25   |     | ITNA   | 83OBR 01  | 9.7                 | 0.2   | 5   | IENA   | 80GLA 03  |
| 3.7              | 0.2    | 35  | ITNA   | 81GLA 04  | 9.7                 | 0.2   | 0   | TCGS   | 80AND 01  |
| 3.7              | 0.2    |     | ITNA   | 82GLA 02  | 9.7                 | 0.2   |     | TCGS   | 79FAI 01  |
| 3.7              | 0.3    |     | ITNA   | 82SUZ 02  | 9.7                 | 0.3   |     | ITNA   | 84SUZ 02  |
| 3.7              | 0.6    |     | ITNA   | 85FIL 01  |                     |       |     |        |           |
| 3.72             | 0.08   | 17  | ITNA   | 84KYL 01  | <u>Ga (ug/g)</u>    |       |     |        |           |
| 3.9              | 0.3    |     | ITNA   | 84SUZ 02  | 33                  |       | 6   | EXRF   | 84JEN 01  |
| 4                | 0.2    |     | ITNA   | 85VOG 01  | 34                  |       | 6   | EXRF   | 84JEN 01  |
| 4.06             | 0.14   |     | ITNA   | 85SUN 01  | 45                  | 5     |     | ITNA   | 85FIL 01  |
|                  |        |     |        |           | 51                  | 5     |     | ITNA   | 82SUZ 02  |
| <u>F (ug/g)</u>  |        |     |        |           | 54                  | 4     |     | CPXRF  | 84AHL 01  |
| 23               | 2      |     | ISE    | 83BET 02  | 55                  | 4.6   |     | CPXRF  | 80KIR 01  |
| 70               |        |     | UU     | 85RIC 01  | 55.7                | 4.5   |     | ITNA   | 83OBR 01  |
| 87               |        |     | CPAA   | 83BIR 01  | 56                  |       | 35  | IENA   | 81GLA 04  |
| 107              |        |     | SSMS   | 85CLA 02  | 57.5                |       |     | FAA    | 85XIA 01  |
| 114              | 13     |     | CPAA   | 85CLA 02  | 59                  | 1     | 35  | IENA   | 80GLA 03  |
|                  |        |     |        |           | 62.5                | 1     |     | WXRF   | 84KYL 01  |
| <u>Fe (%)</u>    |        |     |        |           | <u>Gd (ug/g)</u>    |       |     |        |           |
| 6.7              | 0.3    |     | CPXRF  | 84AHL 01  | 15.3                | 0.2   |     | TCGS   | 79FAI 01  |
| 8.4              | 0.1    |     | ITNA   | 85FIL 01  | 16.3                | 0.8   |     | TCGS   | 85VOG 01  |
| 8.54             |        | 6   | EXRF   | 84JEN 01  | 17                  | 2     | 4   | TCGS   | 85GLA 05  |
| 8.6              |        | 6   | EXRF   | 84JEN 01  | 18                  | 2     | 4   | TCGS   | 85GLA 05  |
| 8.83             | 0.43   |     | ICPES  | 84NAD 01  | 23.5                | 0.3   |     | TCGS   | 80AND 01  |
| 8.84             |        |     | AA     | 82GLA 02  | 25                  | 2     |     | ITNA   | 84SUZ 02  |
| 8.88             | 0.07   |     | AA     | 82NAD 02  | <u>Ge (ug/g)</u>    |       |     |        |           |
| 9.16             | 0.01   |     | ICPMS  | 86SCI 02  | 33.5                | 0.7   |     | COLOR  | 84SHI 01  |
| 9.21             | 0.1    |     | ICPES  | 82NAD 02  | 33.8                | 3.4   |     | ICPES  | 84NAD 02  |
| 9.23             | 0.09   | 35  | ITNA   | 81GLA 02  | 34                  |       | 6   | EXRF   | 84JEN 01  |
| 9.24             | 0.13   | 17  | ITNA   | 84KYL 01  | 34                  |       | 6   | EXRF   | 84JEN 01  |
| 9.26             | 0.02   | 16  | EXRF   | 82PEL 01  | 34                  | 2     |     | CPXRF  | 84AHL 01  |
| 9.2967           | 0.2097 |     | ICPES  | 85PEA 01  | <u>H2O-T (%)</u>    |       |     |        |           |
| 9.3              | 0.02   | 16  | EXRF   | 82PEL 01  | 0.35                |       |     | FD     | 80KHA 02  |
| 9.3              | 0.1    |     | ICPES  | 85HAR 01  |                     |       |     |        |           |
| 9.36             | 0.02   | 11  | ICPES  | 85SAT 01  |                     |       |     |        |           |
| 9.36             | 0.49   | 35  | NAA    | 81GLA 04  |                     |       |     |        |           |
| 9.38             | 0.07   |     | ICPES  | 84BOT 01  |                     |       |     |        |           |
| 9.4              | 0.1    | 5   | IENA   | 80GLA 03  |                     |       |     |        |           |
| 9.4              | 0.3    | 12  | ITNA   | 82SUZ 02  |                     |       |     |        |           |
| 9.43             | 0.17   | 17  | ITNA   | 84KYL 01  |                     |       |     |        |           |
| 9.48             | 0.02   | 16  | EXRF   | 82PEL 01  |                     |       |     |        |           |
| 9.49             | 0.1    |     | ITNA   | 84GLA 02  |                     |       |     |        |           |
| 9.5              | 0.15   |     | ITNA   | 85VOG 01  |                     |       |     |        |           |
| 9.5              | 0.3    |     | ITNA   | 80GAR 01  |                     |       |     |        |           |
| 9.5              | 0.3    | 12  | ITNA   | 82SUZ 02  |                     |       |     |        |           |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Hf (ug/g)</u> |       |     |        |           | <u>K (%) cont.</u>  |       |     |        |           |
| 6.3              | 0.7   | 9   | ITNA   | 82SUZ 02  | 1.88                | 0.04  |     | ICPES  | 82NAD 02  |
| 6.6              |       |     | ITNA   | 82GLA 02  | 1.88                | 0.1   | 35  | ITNA   | 81GLA 04  |
| 7                | 0.2   | 17  | ITNA   | 84KYL 01  | 1.89                | 0.02  | 16  | EXRF   | 82PEL 01  |
| 7                | 0.6   |     | ITNA   | 85FIL 01  | 1.9                 | 0.02  | 16  | EXRF   | 82PEL 01  |
| 7.2              | 0.3   | 35  | ITNA   | 81GLA 02  | 1.909               | 0.083 |     | ICPES  | 85PEA 01  |
| 7.2              | 0.8   | 9   | ITNA   | 82SUZ 02  | 1.92                | 0.04  |     | ITNA   | 85VOG 01  |
| 7.31             | 0.37  |     | ITNA   | 85SUN 01  | 1.93                | 0.03  |     | AA     | 82NAD 02  |
| 7.4              | 0.4   |     | ITNA   | 84GLA 02  | 1.94                | 0.11  |     | TCGS   | 85VOG 01  |
| 7.5              | 0.4   | 17  | ITNA   | 84KYL 01  | 1.96                | 0.02  |     | AA     | 82GLA 02  |
| 7.6              | 0.2   | 35  | NAA    | 81GLA 04  | 1.97                | 0.04  |     | TCGS   | 79FAI 01  |
| 7.6              | 0.2   |     | ITNA   | 85VOG 01  | 1.97                | 0.04  | D   | TCGS   | 80AND 01  |
| 7.6              | 0.3   |     | ITNA   | 84SUZ 02  | 1.99                | 0.03  | 35  | IENA   | 80GLA 03  |
| 7.78             | 0.85  |     | ITNA   | 80GAR 01  | 2.09                | 0.08  |     | ICPES  | 85HAR 01  |
| 7.8              | 0.2   | 35  | IENA   | 80GLA 03  | 2.29                |       | 6   | EXRF   | 84JEN 01  |
|                  |       |     |        |           | 2.31                |       | 6   | EXRF   | 84JEN 01  |
| <u>Hg (ng/g)</u> |       |     |        |           | <u>K-40 (pCi/g)</u> |       |     |        |           |
| 150              | 10    |     | CVAA   | 82GLA 02  |                     |       |     |        |           |
| 151              | 12    |     | CVAA   | 82DOO 01  | 13.9                | 0.4   |     | GAMMA  | 84ROS 03  |
| 192              | 8     |     | ICPMS  | 86SCI 02  |                     |       |     |        |           |
| <u>Ho (ug/g)</u> |       |     |        |           | <u>La (ug/g)</u>    |       |     |        |           |
| 2.9              | 0.4   |     | ITNA   | 84SUZ 02  | 62                  | 2     |     | ITNA   | 82SUZ 02  |
|                  |       |     |        |           | 66                  | 2     |     | ITNA   | 84SUZ 02  |
|                  |       |     |        |           | 79                  |       |     | ITNA   | 84GLA 02  |
|                  |       |     |        |           | 79.4                | 1.3   | 17  | ITNA   | 84KYL 01  |
|                  |       |     |        |           | 79.9                | 0.4   | 17  | ITNA   | 84KYL 01  |
| <                | 4.5   |     | ITNA   | 84SUZ 02  | 81                  | 1     |     | ITNA   | 82GLA 02  |
| <                | 5     | L   | ITNA   | 82SUZ 02  | 83                  | 4     | 35  | ITNA   | 81GLA 04  |
|                  |       |     |        |           | 83.8                | 1     |     | ITNA   | 85SUN 01  |
|                  |       |     |        |           | 84                  | 2     |     | ITNA   | 82GRA 01  |
|                  |       |     |        |           | 84                  | 6     | 35  | IENA   | 80GLA 03  |
|                  |       |     |        |           | 87.9                | 7     |     | ITNA   | 83OBR 01  |
|                  |       |     |        |           | 89                  | 5     |     | ITNA   | 85FIL 01  |
|                  |       |     |        |           | 90.2                | 0.9   |     | ITNA   | 85VOG 01  |
|                  |       |     |        |           | 93                  | 2     |     | ICPES  | 85HAR 01  |
|                  |       |     |        |           | 100                 | 23    |     | ITNA   | 80GAR 01  |
| <u>K (%)</u>     |       |     |        |           | <u>Li (ug/g)</u>    |       |     |        |           |
| 1.7              | 0.06  |     | ICPES  | 84NAD 01  |                     |       |     |        |           |
| 1.71             | 0.09  |     | CPXRF  | 84AHL 01  |                     |       |     |        |           |
| 1.77             | 0.23  |     | ITNA   | 85FIL 01  | 100                 |       |     | OES    | 83MIL 01  |
| 1.8              | 0.07  |     | CPXRF  | 80KIR 01  | 151                 | 15    |     | ICPES  | 84BOT 01  |
| 1.82             |       |     | ITNA   | 84GLA 02  | 187                 | 6     |     | ICPES  | 84NAD 01  |
| 1.84             | 0.14  |     | ITNA   | 80GAR 01  | 221                 |       |     | CPAA   | 83BIR 01  |
| 1.85             | 0.02  |     | ICPMS  | 86SCI 02  |                     |       |     |        |           |
| 1.85             | 0.02  |     | AA     | 82HAR 01  |                     |       |     |        |           |
| 1.85             | 0.05  |     | ITNA   | 85SUN 01  |                     |       |     |        |           |
| 1.86             | 0.06  |     | ICPES  | 84BOT 01  |                     |       |     |        |           |
| 1.86             | 0.089 |     | ITNA   | 83OBR 01  |                     |       |     |        |           |
| 1.86             | 0.12  |     | ITNA   | 82SUZ 02  |                     |       |     |        |           |
| 1.87             | 0.02  | 16  | EXRF   | 82PEL 01  |                     |       |     |        |           |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Lu (ug/g)</u> |       |     |        |           | <u>Mn (ug/g) cont.</u> |       |     |        |           |
| 0.93             | 0.09  |     | ITNA   | 80GAR 01  | 230                    |       |     | ICPES  | 82NAD 02  |
| 0.97             | 0.25  |     | ITNA   | 82GLA 02  | 260                    | 20    | 35  | IENA   | 80GLA 03  |
| 0.99             | 0.02  | 17  | ITNA   | 84KYL 01  | 277                    | 7     |     | ITNA   | 84GLA 02  |
| 1.04             | 0.07  |     | ITNA   | 85SUN 01  | 1000                   |       | 6   | EXRF   | 84JEN 01  |
| 1.06             | 0.13  |     | ITNA   | 84GLA 11  | 1010                   |       | 6   | EXRF   | 84JEN 01  |
| 1.17             | 0.03  | 17  | ITNA   | 84KYL 01  | <u>Mo (ug/g)</u>       |       |     |        |           |
| 1.33             | 0.1   |     | ITNA   | 84SUZ 02  | 26                     | 3     |     | CPXRF  | 84AHL 01  |
| 1.44             | 0.12  |     | ITNA   | 82SUZ 02  | 27                     | 6     |     | ITNA   | 82SUZ 02  |
| <u>Mg (ug/g)</u> |       |     |        |           | 28.8                   | 2.3   |     | RTNA   | 84MOK 02  |
| 1400             | 200   |     | AA     | 82HAR 01  | 29.2                   | 0.6   |     | ICPMS  | 86SCI 02  |
| 3800             | 700   |     | CPXRF  | 80KIR 01  | 30                     | 4.2   |     | CPXRF  | 80KIR 01  |
| 3900             | 200   |     | ICPES  | 84NAD 01  | 31.3                   | 3.6   |     | ITNA   | 85VOG 01  |
| 4200             |       |     | AA     | 82GLA 02  | 32                     | 2     |     | ICPES  | 84BOT 01  |
| 4440             | 40    |     | ICPMS  | 86SCI 02  | 36                     | 1     | 35  | IENA   | 80GLA 03  |
| 4500             | 500   |     | ITNA   | 80GAR 01  | <u>Na (ug/g)</u>       |       |     |        |           |
| 4520             | 80    |     | ICPES  | 84BOT 01  | 1484                   |       |     | ICPES  | 85PEA 01  |
| 4590             | 30    |     | AA     | 82NAD 02  | 1560                   | 70    |     | AA     | 82NAD 02  |
| 4600             | 70    |     | ICPES  | 82NAD 02  | 1600                   | 100   |     | AA     | 82HAR 01  |
| 4660             | 50    |     | ICPES  | 85HAR 01  | 1670                   | 20    |     | ICPMS  | 86SCI 02  |
| 4710             | 80    | 11  | ICPES  | 85SAT 01  | 1680                   | 90    |     | ITNA   | 83OBR 01  |
| 4760             | 200   | 11  | ICPES  | 85SAT 01  | 1700                   | 70    |     | ICPES  | 82NAD 02  |
| 4800             |       |     | CPAA   | 83BIR 01  | 1720                   | 50    |     | ITNA   | 80GAR 01  |
| 4824             |       |     | ICPES  | 85PEA 01  | 1730                   | 10    |     | ITNA   | 84GLA 02  |
| 5700             |       |     | ITNA   | 85GAU 04  | 1740                   | 70    |     | ITNA   | 85VOG 01  |
| 6200             | 500   |     | IENA   | 85GLA 02  | 1740                   | 100   | 35  | ITNA   | 81GLA 04  |
| 8000             | 1300  |     | ITNA   | 82SUZ 02  | 1750                   | 50    |     | ITNA   | 82SUZ 02  |
| <u>Mn (ug/g)</u> |       |     |        |           | 1760                   |       |     | ITNA   | 82GLA 02  |
| 167              | 7     |     | ITNA   | 85FIL 01  | 1760                   | 60    |     | ICPES  | 85HAR 01  |
| 167              | 9     |     | AA     | 82HAR 01  | 1760                   | 80    |     | ICPES  | 84BOT 01  |
| 170              | 24    |     | ITNA   | 82SUZ 02  | 1769                   |       |     | CPAA   | 83BIR 01  |
| 173              | 5     |     | ICPES  | 85HAR 01  | 1770                   | 50    |     | ITNA   | 85SUN 01  |
| 180              |       | 11  | ICPES  | 85SAT 01  | 1770                   | 80    |     | ITNA   | 85GAU 04  |
| 181              | 9     |     | ITNA   | 85SUN 01  | 1800                   | 100   |     | ICPES  | 84NAD 01  |
| 182              |       |     | ITNA   | 85GAU 04  | 1800                   | 100   | 35  | ITNA   | 81GLA 02  |
| 182              | 3     | 35  | ITNA   | 81GLA 02  | 1900                   | 70    | 17  | ITNA   | 84KYL 01  |
| 184              | 7     |     | ICPES  | 84NAD 01  | 2020                   | 400   |     | ITNA   | 82SCH 05  |
| 185              | 11    |     | ITNA   | 83OBR 01  | 2100                   | 600   |     | TCGS   | 79FAI 01  |
| 188              | 1     | 11  | ICPES  | 85SAT 01  | 2100                   | 600   | D   | TCGS   | 80AND 01  |
| 189              | 2     |     | ITNA   | 85VOG 01  | 2200                   | 600   |     | CPXRF  | 80KIR 01  |
| 189              | 5     |     | ICPES  | 84BOT 01  | <u>Nb (ug/g)</u>       |       |     |        |           |
| 190              | 15    | D   | TCGS   | 80AND 01  | 24                     | 3     |     | CPXRF  | 84AHL 01  |
| 190              | 15    |     | TCGS   | 79FAI 01  | 31.5                   | 2     |     | WXRF   | 84KYL 01  |
| 191              | 4     |     | ITNA   | 80GAR 01  |                        |       |     |        |           |
| 195              | 15    |     | CPXRF  | 80KIR 01  |                        |       |     |        |           |
| 200              | 56    |     | CPXRF  | 84AHL 01  |                        |       |     |        |           |
| 206              | 7     |     | ICPMS  | 86SCI 02  |                        |       |     |        |           |
| 210              | 50    | 35  | ITNA   | 81GLA 04  |                        |       |     |        |           |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Nd (ug/g)</u> |       |     |        |           | <u>Pb (ug/g) cont.</u> |       |     |        |           |
| 65.6             | 5.4   |     | TCGS   | 79FAI 01  | 72                     |       | 6   | EXRF   | 84JEN 01  |
| 66               | 5     |     | TCGS   | 80AND 01  | 72                     | 3     |     | POT    | 84PIN 01  |
| 71               | 3     | 35  | IENA   | 80GLA 03  | 72.4                   |       |     | AA     | 84TER 01  |
| 77.3             | 8.9   |     | ITNA   | 85SUN 01  | 73                     |       | 6   | EXRF   | 84JEN 01  |
| 89               | 5     |     | ITNA   | 84SUZ 02  | 74                     | 4     | 13  | ICPES  | 84BOT 01  |
| 113              | 7     | 12  | ITNA   | 82SUZ 02  | 75                     | 5     |     | CPXRF  | 84AHL 01  |
| 122              | 13    | 12  | ITNA   | 82SUZ 02  | 75.1                   | 1     |     | WXRF   | 84KYL 01  |
| <u>Ni (ug/g)</u> |       |     |        |           | 75.8                   |       |     | EXRF   | 84PIN 01  |
| 92               | 8     |     | CPXRF  | 84AHL 01  | 75.9                   |       |     | ICPES  | 85NAR 02  |
| 97               | 36    |     | ITNA   | 85FIL 01  | <u>Pb-210 (pCi/g)</u>  |       |     |        |           |
| 105              |       | 6   | EXRF   | 84JEN 01  | 3.4                    | 0.6   |     | GAMMA  | 84ROS 03  |
| 106              |       | 6   | EXRF   | 84JEN 01  | 3.9                    | 0.6   |     | NM     | 84ROS 03  |
| 112              | 4.8   |     | CPXRF  | 80KIR 01  | <u>Po-210 (pCi/g)</u>  |       |     |        |           |
| 117              | 6     | 35  | IENA   | 80GLA 03  | 3.75                   | 0.15  |     | RAS    | 84ROS 03  |
| 119              | 2     |     | ICPES  | 84BOT 01  | <u>Pr (ug/g)</u>       |       |     |        |           |
| 124              |       |     | VOLT   | 84BRA 01  | 17.9                   | 1.7   | 12  | ITNA   | 82SUZ 02  |
| 127              | 5     |     | ICPES  | 85HAR 01  | 18.9                   | 1.1   | 12  | ITNA   | 82SUZ 02  |
| 128              | 6     | 12  | ITNA   | 82SUZ 02  | <u>Ra-226 (pCi/g)</u>  |       |     |        |           |
| 132              | 4     |     | ICPMS  | 86SCI 02  | 3.2                    | 0.2   |     | GAMMA  | 84ROS 03  |
| 133              | 2.1   |     | COLOR  | 84KAT 01  | <u>Rb (ug/g)</u>       |       |     |        |           |
| 133              | 4     | 11  | ICPES  | 85SAT 01  | 121                    | 7     |     | CPXRF  | 84AHL 01  |
| 134              | 0.6   |     | AA     | 84KAT 01  | 124                    | 4     | 12  | ITNA   | 82SUZ 02  |
| 138              | 2     |     | WXRF   | 84KYL 01  | 130                    | 26    |     | ITNA   | 80GAR 01  |
| 139              | 7     | 12  | ITNA   | 82SUZ 02  | 134                    | 8     |     | ITNA   | 84GLA 02  |
| 140              |       | 11  | ICPES  | 85SAT 01  | 134                    | 16    | 35  | NAA    | 81GLA 04  |
| <u>O (%)</u>     |       |     |        |           | 135                    |       | 6   | EXRF   | 84JEN 01  |
| 47.66            | 0.36  | 34  | 14NAA  | 80KHA 02  | 136                    |       | 6   | EXRF   | 84JEN 01  |
| <u>P (ug/g)</u>  |       |     |        |           | 138                    | 8     | 12  | ITNA   | 82SUZ 02  |
| 760              | 10    |     | ICPES  | 85HAR 01  | 140                    | 8     |     | ITNA   | 85SUN 01  |
| 1320             | 30    |     | ICPES  | 84BOT 01  | 140.7                  | 2     |     | WXRF   | 84KYL 01  |
| 1400             | 40    |     | ICPES  | 84NAD 01  | 147                    | 8     | 35  | ITNA   | 81GLA 02  |
| 1700             |       |     | XRF    | 81TUR 01  | 150                    | 12    |     | CPXRF  | 80KIR 01  |
| 1744             |       |     | ICPES  | 85PEA 01  | 163                    | 2     | 35  | IENA   | 80GLA 03  |
| 1800             | 300   |     | ICPES  | 82NAD 02  | 170                    | 31    |     | ITNA   | 85FIL 01  |
| 1840             | 120   |     | ICPMS  | 86SCI 02  | <u>S (ug/g)</u>        |       |     |        |           |
| 2000             |       |     | AA     | 82NAD 02  | 1200                   |       |     | ICPES  | 85PEA 01  |
| <u>Pb (ug/g)</u> |       |     |        |           | 1350                   | 90    |     | ICPMS  | 86SCI 02  |
| 51               | 12    | 13  | ICPES  | 84BOT 01  | 2300                   | 200   |     | CPXRF  | 84AHL 01  |
| 60               | 10    |     | ICPES  | 85HAR 01  | 2700                   | 200   | D   | TCGS   | 80AND 01  |
| 64               | 13    |     | ICPES  | 84NAD 01  | 2700                   | 200   |     | TCGS   | 79FAI 01  |
| 65               | 5.7   |     | CPXRF  | 80KIR 01  |                        |       |     |        |           |
| 70.4             | 1.2   |     | ICPMS  | 86SCI 02  |                        |       |     |        |           |
| 71.8             | 0.6   |     | IDMS   | 83BRO 01  |                        |       |     |        |           |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                   | Uncer  | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------------|--------|-----|--------|-----------|
| <u>s-32/34 (ratio)</u> |       |     |        |           | <u>Se (Ug/g) cont.</u> |        |     |        |           |
| 22.641                 |       |     | IDMS   | 84KEL 01  | 9.4                    | 0.3    | 35  | RTNA   | 81GLA 01  |
|                        |       |     |        |           | 9.4                    | 0.5    |     | RTNA   | 81SLO 01  |
| <u>s-33/34 (ratio)</u> |       |     |        |           | 9.5                    | 1.2    |     | CPXRF  | 84AHL 01  |
| 0.1781                 |       |     | IDMS   | 84KEL 01  | 9.8                    | 0.5    |     | HAA    | 85YAM 01  |
| <u>Sb (Ug/g)</u>       |       |     |        |           | 10                     | 2      | 35  | IENA   | 80GLA 03  |
| 4.2                    |       | 11  | HAA    | 82CRO 03  | 10.2                   | 0.6    | 9   | ITNA   | 82SUZ 02  |
| 4.8                    |       |     | AF     | 85NAR 02  | 10.4                   | 5.4    |     | ICPES  | 84BOT 01  |
| 6.3                    | 0.2   |     | ITNA   | 82SUZ 02  | 10.6                   |        |     | ICPES  | 85NAR 02  |
| 6.3                    | 0.5   | 17  | ITNA   | 84KYL 01  | 10.62                  | 0.09   |     | HAA    | 85CHA 01  |
| 6.4                    | 0.4   | 17  | ITNA   | 84KYL 01  | 10.7                   | 0.8    | 35  | NAA    | 81GLA 04  |
| 6.5                    |       | 11  | HAA    | 82CRO 03  | 10.8                   | 0.3    | 0   | HAA    | 84IMA 03  |
| 6.5                    | 0.4   |     | HAA    | 85YAM 01  | 10.8                   | 0.3    | 7   | HAA    | 84IMA 01  |
| 6.6                    |       |     | ITNA   | 82GLA 02  | 12                     | 5      |     | ICPMS  | 86SCI 02  |
| 6.88                   | 0.28  |     | ICPMS  | 86SCI 02  | 12.7                   | 1.3    |     | ITNA   | 84SUZ 02  |
| 6.9                    | 0.3   |     | ITNA   | 85VOG 01  | 13                     | 3      |     | ITNA   | 85FIL 01  |
| 6.9                    | 0.7   |     | ITNA   | 85FIL 01  | <u>Si (%)</u>          |        |     |        |           |
| 6.95                   | 0.22  | 35  | ITNA   | 81GLA 02  | 18                     | 0.93   |     | CPXRF  | 80KIR 01  |
| 7.3                    | 0.2   |     | RTNA   | 81SLO 01  | 18.5                   | 1.1    |     | ICPES  | 84NAD 01  |
| 7.49                   | 0.39  |     | ITNA   | 85SUN 01  | 20.4                   | 1.1    |     | CPXRF  | 84AHL 01  |
| 7.7                    | 0.5   | 35  | IENA   | 80GLA 03  | 21                     | 2      |     | TCGS   | 85VOG 01  |
| 7.8                    | 1.5   |     | ITNA   | 80GAR 01  | 22.16                  | 0.29   |     | ICPMS  | 86SCI 02  |
| 8.96                   |       |     | HAA    | 84TER 04  | 22.2                   | 0.4    |     | TCGS   | 79FAI 01  |
| 10.1                   | 3.1   | 13  | ICPES  | 84BOT 01  | 22.2                   | 0.4    | 0   | TCGS   | 80AND 01  |
| <u>Sc (Ug/g)</u>       |       |     |        |           | 22.4                   |        | 6   | EXRF   | 84JEN 01  |
| 34                     | 1     |     | ITNA   | 82SUZ 02  | 22.5                   |        | 6   | EXRF   | 84JEN 01  |
| 34                     | 4.2   |     | CPXRF  | 80KIR 01  | 22.9764                | 0.0934 |     | ICPES  | 85PEA 01  |
| 36                     |       |     | ITNA   | 82GLA 02  | 23                     | 0.2    | 16  | EXRF   | 82PEL 01  |
| 37                     | 2     |     | ITNA   | 85FIL 01  | 23.13                  | 0.2    | 16  | EXRF   | 82PEL 01  |
| 38.8                   | 0.7   | 17  | ITNA   | 84KYL 01  | 23.16                  | 0.2    | 16  | EXRF   | 82PEL 01  |
| 38.9                   | 0.6   |     | ITNA   | 85SUN 01  | 23.37                  | 0.23   |     | ICPES  | 82NAD 02  |
| 39                     | 2     |     | ITNA   | 84GLA 02  | 23.5                   | 0.2    | 11  | ICPES  | 85SAT 01  |
| 39.8                   | 0.8   | 17  | ITNA   | 84KYL 01  | 23.9                   | 0.5    |     | AA     | 82GLA 02  |
| 40                     | 1     | 35  | ITNA   | 81GLA 02  | 23.9                   | 0.5    | 35  | IENA   | 80GLA 03  |
| 40.3                   | 0.8   |     | ICPES  | 85HAR 01  | 24                     | 0.3    | 11  | ICPES  | 85SAT 01  |
| 40.3                   | 0.8   |     | ITNA   | 85VOG 01  | 24.2                   | 0.8    |     | AA     | 82NAD 02  |
| 40.6                   | 1.3   |     | ITNA   | 80GAR 01  | <u>Sm (Ug/g)</u>       |        |     |        |           |
| 41                     | 2     | 35  | ITNA   | 81GLA 04  | 14.5                   | 1.3    | 35  | ITNA   | 81GLA 04  |
| 43                     | 1     | 35  | IENA   | 80GLA 03  | 15                     | 1      |     | ITNA   | 85FIL 01  |
| <u>Se (Ug/g)</u>       |       |     |        |           | 16                     | 0.2    |     | TCGS   | 79FAI 01  |
| 6.2                    |       |     | AF     | 85NAR 02  | 16                     | 0.2    | 0   | TCGS   | 80AND 01  |
| 7                      |       | 6   | EXRF   | 84JEN 01  | 16.1                   | 1.5    | 4   | TCGS   | 85GLA 05  |
| 7                      |       | 6   | EXRF   | 84JEN 01  | 16.2                   | 1.5    | 4   | TCGS   | 85GLA 05  |
| 7.8                    | 2.1   |     | CPXRF  | 80KIR 01  | 16.3                   | 0.5    |     | ITNA   | 85SUN 01  |
| 8.8                    | 0.4   | 9   | ITNA   | 82SUZ 02  | 16.4                   | 0.1    |     | ITNA   | 82GLA 02  |
|                        |       |     |        |           | 16.6                   | 0.3    |     | ITNA   | 85VOG 01  |
|                        |       |     |        |           | 16.7                   |        |     | ITNA   | 84GLA 02  |
|                        |       |     |        |           | 16.9                   | 0.5    |     | TCGS   | 85VOG 01  |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Sm (ug/g) cont.</u> |       |     |        |           | <u>Tb (ug/g)</u>      |       |     |        |           |
| 17                     | 0.3   | 17  | ITNA   | 84KYL 01  | 2.1                   | 0.1   |     | ITNA   | 82SUZ 02  |
| 17.1                   | 0.2   | 17  | ITNA   | 84KYL 01  | 2.1                   | 0.2   |     | ITNA   | 84GLA 02  |
| 18.8                   | 0.6   |     | ITNA   | 83OBR 01  | 2.2                   | 0.1   |     | ITNA   | 84SUZ 02  |
| 19.4                   | 0.7   |     | ITNA   | 82SUZ 02  | 2.3                   | 0.7   |     | ITNA   | 80GAR 01  |
| 20                     | 4.4   |     | ITNA   | 80GAR 01  | 2.5                   | 0.1   | 17  | ITNA   | 84KYL 01  |
| 21                     | 1     |     | ITNA   | 84SUZ 02  | 2.6                   | 0.1   | 17  | ITNA   | 84KYL 01  |
|                        |       |     |        |           | 2.75                  | 0.18  |     | ITNA   | 85SUN 01  |
|                        |       |     |        |           | 2.8                   | 0.5   | 35  | NAA    | 81GLA 04  |
|                        |       |     |        |           | 2.9                   | 0.1   | 35  | IENA   | 80GLA 03  |
|                        |       |     |        |           | 4.7                   | 1.7   |     | ITNA   | 85FIL 01  |
| <u>Sn (ug/g)</u>       |       |     |        |           | <u>Te (ug/g)</u>      |       |     |        |           |
| 3.96                   | 0.12  |     | ICPMS  | 86SCI 02  | <                     | 3.5   |     | ITNA   | 84SUZ 02  |
| 6.3                    | 0.2   |     | FAA    | 84LOW 01  | <                     | 6.6   | L   | ITNA   | 82SUZ 02  |
| 6.36                   | 0.15  |     | FAA    | 85TER 01  |                       |       |     |        |           |
| 14.8                   |       |     | AF     | 85NAR 02  |                       |       |     |        |           |
| 18.5                   |       |     | ICPES  | 85NAR 02  |                       |       |     |        |           |
| <u>Sr (ug/g)</u>       |       |     |        |           | <u>Th (ug/g)</u>      |       |     |        |           |
| 717                    | 26    |     | ICPES  | 84NAD 01  | 11                    |       | 6   | EXRF   | 84JEN 01  |
| 740                    | 20    | 5   | IENA   | 80GLA 03  | 11                    |       | 6   | EXRF   | 84JEN 01  |
| 742                    | 23    |     | ITNA   | 85SUN 01  | 18                    | 3     |     | CPXRF  | 84AHL 01  |
| 750                    | 40    |     | CPXRF  | 84AHL 01  | 22.4                  |       |     | ITNA   | 82GLA 02  |
| 770                    |       | 35  | IENA   | 81GLA 04  | 23.2                  | 0.8   |     | ICPMS  | 86SCI 02  |
| 790                    | 30    |     | ICPES  | 84BOT 01  | 24                    | 2     |     | ITNA   | 85FIL 01  |
| 790                    | 79    |     | ITNA   | 85FIL 01  | 24.3                  | 3.8   | 12  | ITNA   | 82SUZ 02  |
| 813                    | 70    |     | ITNA   | 83OBR 01  | 24.6                  | 0.9   | 35  | NAA    | 81GLA 04  |
| 815                    | 7     |     | IENA   | 84GLA 02  | 24.6                  | 1.1   | 35  | ITNA   | 81GLA 02  |
| 815                    | 10    | 11  | ICPES  | 85SAT 01  | 24.7                  | 1.2   |     | ITNA   | 85VOG 01  |
| 819                    | 54    |     | ITNA   | 80GAR 01  | 24.7                  | 1.4   | 17  | ITNA   | 84KYL 01  |
| 825                    | 40    |     | CPXRF  | 80KIR 01  | 24.8                  | 0.5   |     | ITNA   | 84GLA 02  |
| 829                    | 22    |     | IENA   | 84GLA 11  | 24.8                  | 1.6   |     | ITNA   | 80GAR 01  |
| 834.5                  | 2     |     | WXRF   | 84KYL 01  | 25                    | 0.7   |     | ITNA   | 84SUZ 02  |
| 840                    | 10    |     | ICPES  | 85HAR 01  | 25                    | 1     | 35  | IENA   | 80GLA 03  |
| 840                    | 30    | 5   | IENA   | 80GLA 03  | 25.6                  | 1     | 17  | ITNA   | 84KYL 01  |
| 840                    | 40    | 12  | ITNA   | 82SUZ 02  | 25.6                  | 2.8   |     | ITNA   | 86GAU 01  |
| 850                    | 70    | 12  | ITNA   | 82SUZ 02  | 26                    | 0.4   |     | ITNA   | 85SUN 01  |
| 882                    |       | 6   | EXRF   | 84JEN 01  | 26                    | 1.3   | 12  | ITNA   | 82SUZ 02  |
| 890                    |       | 6   | EXRF   | 84JEN 01  | 27.9                  | 1     |     | WXRF   | 84KYL 01  |
|                        |       |     |        |           | 28                    | 8.3   |     | CPXRF  | 80KIR 01  |
| <u>Ta (ug/g)</u>       |       |     |        |           | <u>Th-232 (pCi/g)</u> |       |     |        |           |
| 1.71                   | 0.05  |     | ITNA   | 82SUZ 02  | 2.4                   | 0.2   |     | GAMMA  | 84ROS 03  |
| 1.8                    | 0.07  |     | ITNA   | 84SUZ 02  |                       |       |     |        |           |
| 1.8                    | 0.1   |     | ITNA   | 84GLA 02  |                       |       |     |        |           |
| 1.8                    | 0.12  | 35  | ITNA   | 81GLA 02  |                       |       |     |        |           |
| 1.8                    | 0.2   | 35  | NAA    | 81GLA 04  |                       |       |     |        |           |
| 1.94                   |       |     | ITNA   | 82GLA 02  |                       |       |     |        |           |
| 2.0                    | 0.1   | 17  | ITNA   | 84KYL 01  |                       |       |     |        |           |
| 2.0                    | 0.5   |     | ITNA   | 80GAR 01  |                       |       |     |        |           |
| 2.1                    | 0.2   | 35  | IENA   | 80GLA 03  |                       |       |     |        |           |
| 2.11                   | 0.16  |     | ITNA   | 85SUN 01  |                       |       |     |        |           |
| 2.3                    | 0.1   | 17  | ITNA   | 84KYL 01  |                       |       |     |        |           |
| 2.3                    | 0.2   |     | ITNA   | 85FIL 01  |                       |       |     |        |           |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Ti (ug/g)</u> |       |     |        |           | <u>U (ug/g) cont.</u> |       |     |        |           |
| 6660             |       | 6   | EXRF   | 84JEN 01  | 10.3                  | 0.4   |     | ITNA   | 82SUZ 02  |
| 6700             | 200   |     | ICPES  | 84NAD 01  | 10.3                  | 0.4   |     | DNA    | 84GLA 11  |
| 6710             |       | 6   | EXRF   | 84JEN 01  | 10.4                  | 0.1   |     | DNA    | 85GLA 04  |
| 7400             | 200   | 16  | EXRF   | 82PEL 01  | 10.4                  | 0.3   | 17  | DNA    | 82CON 01  |
| 7700             | 300   |     | ICPES  | 84BOT 01  | 10.4                  | 0.5   |     | ITNA   | 85VOG 01  |
| 7800             | 300   |     | ITNA   | 82SUZ 02  | 10.4                  | 0.8   |     | DNA    | 84GLA 02  |
| 7880             | 540   |     | ITNA   | 83OBR 01  | 10.47                 | 0.09  | 35  | DNA    | 80GLA 01  |
| 7940             | 90    | 11  | ICPES  | 85SAT 01  | 10.47                 | 0.15  |     | DNA    | 86GAU 01  |
| 8000             | 40    |     | ICPMS  | 86SCI 02  | 10.6                  | 0.4   | 35  | NAA    | 81GLA 04  |
| 8000             | 600   | 35  | NAA    | 81GLA 04  | 10.7                  | 0.3   | 17  | DNA    | 82CON 01  |
| 8000             | 800   |     | CPXRF  | 80KIR 01  | 11                    | 2.7   |     | CPXRF  | 80KIR 01  |
| 8060             | 370   |     | ITNA   | 80GAR 01  |                       |       |     |        |           |
| 8100             | 100   |     | ICPES  | 85HAR 01  | <u>U-238 (pCi/g)</u>  |       |     |        |           |
| 8200             | 700   | 35  | ITNA   | 81GLA 02  | 3.6                   | 0.3   |     | GAMMA  | 84ROS 03  |
| 8300             |       |     | ITNA   | 84GLA 02  |                       |       |     |        |           |
| 8300             | 500   |     | CPXRF  | 84AHL 01  | <u>V (ug/g)</u>       |       |     |        |           |
| 8320             | 70    |     | ITNA   | 85VOG 01  | 206                   | 56    |     | CPXRF  | 84AHL 01  |
| 8386             |       |     | ICPES  | 85PEA 01  | 271                   | 14    |     | ITNA   | 85SUN 01  |
| 8400             | 60    |     | ICPES  | 82NAD 02  | 277                   | 5     | 11  | ICPES  | 85SAT 01  |
| 8400             | 100   | 35  | IENA   | 80GLA 03  | 279                   | 8     |     | ICPES  | 84NAD 01  |
| 8400             | 100   | D   | TCGS   | 80AND 01  | 280                   |       |     | ICPES  | 81WAL 01  |
| 8400             | 100   | 16  | EXRF   | 82PEL 01  | 280                   | 18    |     | CPXRF  | 80KIR 01  |
| 8400             | 100   | 16  | EXRF   | 82PEL 01  | 280                   |       |     | ICPES  | 81WAL 01  |
| 8400             | 100   |     | TCGS   | 79FAI 01  | 288                   | 20    |     | ITNA   | 83OBR 01  |
| 8600             | 500   |     | TCGS   | 85VOG 01  | 289                   | 3     |     | ITNA   | 85VOG 01  |
| 8855             | 830   |     | ITNA   | 85SUN 01  | 290                   | 20    |     | ITNA   | 82SUZ 02  |
| 9000             |       |     | AA     | 82NAD 02  | 290                   | 20    | 35  | IENA   | 80GLA 03  |
| 9000             | 1440  |     | ITNA   | 85FIL 01  | 290                   | 20    | 35  | ITNA   | 81GLA 02  |
|                  |       |     |        |           | 292                   | 16    | 35  | ITNA   | 81GLA 02  |
| <u>Tl (ug/g)</u> |       |     |        |           | 294                   | 28    | 35  | ITNA   | 81GLA 04  |
| 4.4              | 1.3   |     | CPXRF  | 80KIR 01  | 295                   | 5     |     | ICPES  | 85HAR 01  |
| 5.7              | 0.2   |     | ICPMS  | 86SCI 02  | 301                   | 8     |     | ITNA   | 80GAR 01  |
| 5.7              | 0.7   |     | IENA   | 85RUC 01  | 304                   | 5     | 11  | ICPES  | 85SAT 01  |
|                  |       |     |        |           | 305                   | 5     |     | ICPES  | 84BOT 01  |
|                  |       |     |        |           | 324                   | 16    |     | ICPMS  | 86SCI 02  |
| <u>Tm (ug/g)</u> |       |     |        |           | 344                   | 30    |     | ITNA   | 85FIL 01  |
| 2.4              | 0.1   |     | ITNA   | 84SUZ 02  | 360                   | 40    |     | TCGS   | 79FAI 01  |
|                  |       |     |        |           | 360                   | 40    | D   | TCGS   | 80AND 01  |
| <u>U (ug/g)</u>  |       |     |        |           | <u>W (ug/g)</u>       |       |     |        |           |
| 8.9              | 0.7   |     | ITNA   | 85FIL 01  | 4.71                  | 0.37  |     | ITNA   | 85SUN 01  |
| 9.66             | 0.25  |     | ITNA   | 85SUN 01  | 5.4                   | 0.4   | 35  | IENA   | 80GLA 03  |
| 9.7              | 0.8   |     | ITNA   | 84SUZ 02  | 5.4                   | 0.4   | D   | NAA    | 81GLA 04  |
| 9.83             | 0.9   |     | IENA   | 83OBR 01  | 5.4                   | 0.8   |     | ITNA   | 83OBR 01  |
| 10.2             | 0.02  |     | ICPMS  | 86SCI 02  | 5.9                   | 0.4   |     | ITNA   | 82SUZ 02  |
| 10.2             | 0.1   | 35  | IENA   | 80GLA 03  | 6.4                   | 0.6   |     | ITNA   | 84SUZ 02  |
| 10.2             | 0.2   |     | DNA    | 80GAR 01  | 6.9                   | 1.2   |     | RENA   | 82GLA 02  |
| 10.2             | 0.3   |     | DNA    | 82GLA 02  |                       |       |     |        |           |
| 10.2             | 0.8   |     | FLUOR  | 86KAN 01  |                       |       |     |        |           |
| 10.3             | 0.2   |     | DNA    | 85GAU 04  |                       |       |     |        |           |

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

| Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|
| <u>Y (ug/g)</u>  |       |     |        |           |
| 74               | 5     |     | CPXRF  | 84AHL 01  |
| 81               |       | 6   | EXRF   | 84JEN 01  |
| 82               |       | 6   | EXRF   | 84JEN 01  |
| 89               | 4     |     | ICPES  | 85HAR 01  |
| 101.4            | 1     |     | WXRF   | 84KYL 01  |
| <u>Yb (ug/g)</u> |       |     |        |           |
| 6.02             | 0.26  |     | ITNA   | 85SUN 01  |
| 6.9              | 0.3   |     | ITNA   | 82SUZ 02  |
| 7.2              | 0.3   |     | ITNA   | 84GLA 11  |
| 7.5              | 0.2   | 17  | ITNA   | 84KYL 01  |
| 7.5              | 0.3   | 17  | ITNA   | 84KYL 01  |
| 7.5              | 0.5   |     | ITNA   | 82GLA 02  |
| 8.2              |       | 35  | ITNA   | 81GLA 04  |
| 8.3              | 0.7   |     | ITNA   | 84SUZ 02  |
| 10               | 1.8   |     | ITNA   | 80GAR 01  |
| <u>Zn (ug/g)</u> |       |     |        |           |
| 189              |       | 6   | AF     | 84NAR 02  |
| 191              |       |     | ICPES  | 85NAR 02  |
| 191              |       | 6   | AF     | 84NAR 02  |
| 196              |       |     | AF     | 85NAR 02  |
| 201              | 11    |     | CPXRF  | 84AHL 01  |
| 218              | 18    |     | CPXRF  | 80KIR 01  |
| 220              | 10    |     | ICPES  | 84BOT 01  |
| 220              | 50    |     | ITNA   | 80GAR 01  |
| 222              | 7     | 5   | IENA   | 80GLA 03  |
| 225              | 32    |     | AA     | 82HAR 01  |
| 226              | 19    |     | ICPES  | 84NAD 01  |
| 230              |       |     | AA     | 82GLA 02  |
| 230              | 8     |     | ICPMS  | 86SCI 02  |
| 233              | 3     | 11  | ICPES  | 85SAT 01  |
| 235              |       | 6   | EXRF   | 84JEN 01  |
| 237              |       | 6   | EXRF   | 84JEN 01  |
| 243              | 10    | 11  | ICPES  | 85SAT 01  |
| 245              | 3     |     | ICPES  | 85HAR 01  |
| 250              | 20    | 12  | ITNA   | 82SUZ 02  |
| 250              | 30    | 12  | ITNA   | 82SUZ 02  |
| 256              | 12    | 5   | IENA   | 80GLA 03  |
| 263              | 2     |     | WXRF   | 84KYL 01  |
| <u>Zr (ug/g)</u> |       |     |        |           |
| 220              | 13    |     | CPXRF  | 84AHL 01  |
| 262.1            | 1.5   |     | WXRF   | 84KYL 01  |
| 300              | 30    | 5   | IENA   | 80GLA 03  |
| 370              | 50    | 5   | IENA   | 80GLA 03  |
| 400              | 50    | 12  | ITNA   | 82SUZ 02  |
| 410              | 40    | 12  | ITNA   | 82SUZ 02  |

TABLE 1634-1: COMPILED DATA FOR NBS SRM 1634 TRACE METALS IN FUEL OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS         |     | CONSENSUS   |      | MEDIAN | RANGE       | AA   |     | NAA         |     | ICPES      |     | OTHER METHODS         |  |
|---------|-------|-------------|-----|-------------|------|--------|-------------|------|-----|-------------|-----|------------|-----|-----------------------|--|
|         |       | Mean ± SD   | (n) | Mean ± SD   | (n)  |        |             | Mean | (n) | Mean ± SD   | (n) | Mean ± SD  | (n) | Method                |  |
| As      | ng/g  | 95          |     | 70 ± 15     | (5)  | 63     | 56 - 95     | ---  |     | 70 ± 15     | (5) | ---        |     | ---                   |  |
| Au      | ng/g  | ---         |     | 24.5        | (1)  | ---    | ---         | ---  |     | 24.5        | (1) | ---        |     | ---                   |  |
| Be      | ng/g  | < 10        |     | ---         |      | ---    | ---         | ---  |     | ---         |     | ---        |     | ---                   |  |
| Br      | ng/g  | ---         |     | 39.8 ± 0.9  | (4)  | 39.1   | 39 - 41     | ---  |     | 40 ± 1      | (3) | ---        |     | ---                   |  |
| Ca      | ug/g  | ---         |     | 15          | (1)  | ---    | ---         | ---  |     | 15          | (1) | ---        |     | ---                   |  |
| Cd      | ng/g  | < 10        |     | 5           | (1)  | ---    | ---         | 5    | (1) | ---         |     | ---        |     | ---                   |  |
| Cl      | ug/g  | ---         |     | 8.1 ± 0.3   | (3)  | 8      | 7.8 - 8.4   | ---  |     | 8.2         | (2) | ---        |     | ---                   |  |
| Co      | ng/g  | ---         |     | 310 ± 50    | (6)  | 301    | 250 - 400   | ---  |     | 320 ± 50    | (5) | ---        |     | ---                   |  |
| Cr      | ng/g  | 90          |     | 97 ± 15     | (4)  | 93     | 80 - 116    | ---  |     | 97 ± 15     | (4) | ---        |     | ---                   |  |
| Cu      | ng/g  | ---         |     | 220         | (1)  | ---    | ---         | ---  |     | 220         | (1) | ---        |     | ---                   |  |
| Eu      | ng/g  | ---         |     | 11          | (1)  | ---    | ---         | ---  |     | 11          | (1) | ---        |     | ---                   |  |
| Fe      | ug/g  | 13.5 ± 1.0  |     | 14 ± 2      | (17) | 14.1   | 10.8 - 20   | 14.1 | (1) | 19 ± 6      | (6) | 15 ± 4     | (3) | 14 ± 2 (7) XRF        |  |
| Fe      | ug/g  | ---         |     | ---         |      | ---    | ---         | ---  |     | ---         |     | ---        |     | 12.3 (1) POL          |  |
| Hg      | ng/g  | 2.3         |     | 2.3         | (2)  | ---    | 2.3 - 2.3   | ---  |     | 2.3         | (2) | ---        |     | ---                   |  |
| K       | ug/g  | ---         |     | 315         | (1)  | ---    | ---         | ---  |     | 315         | (1) | ---        |     | ---                   |  |
| Mn      | ng/g  | 120         |     | 200 ± 90    | (4)  | 190    | 110 - 320   | ---  |     | 200 ± 90    | (4) | ---        |     | ---                   |  |
| Mo      | ng/g  | ---         |     | 870         | (1)  | ---    | ---         | ---  |     | 870         | (1) | ---        |     | ---                   |  |
| Na      | ug/g  | ---         |     | 12 ± 2      | (5)  | 12     | 11.2 - 15.3 | ---  |     | 12.9 ± 1.8  | (4) | ---        |     | ---                   |  |
| Ni      | ug/g  | 36 ± 4      |     | 35.4 ± 2.5  | (20) | 35.2   | 31.1 - 39.5 | 31.1 | (1) | 37 ± 3      | (4) | 35.6 ± 1.0 | (3) | 34 ± 2 (7) XRF        |  |
| Ni      | ug/g  | ---         |     | ---         |      | ---    | ---         | ---  |     | ---         |     | ---        |     | 38.13 ± 0.06 (3) IDMS |  |
| Ni      | ug/g  | ---         |     | ---         |      | ---    | ---         | ---  |     | ---         |     | ---        |     | 35.2 (1) POL          |  |
| Pb      | ng/g  | 41 ± 5      |     | 45.5        | (2)  | ---    | 41 - 50     | ---  |     | ---         |     | ---        |     | 41 (1) POL            |  |
| S       | %     | 2.14 ± 0.02 |     | 2.13 ± 0.11 | (10) | 2.15   | 2 - 2.3     | ---  |     | 2.19 ± 0.14 | (3) | 2.20       | (2) | 2.17 (1) XRF          |  |
| S       | %     | ---         |     | ---         |      | ---    | ---         | ---  |     | ---         |     | ---        |     | 2.00 (1) MECA         |  |
| S       | %     | ---         |     | ---         |      | ---    | ---         | ---  |     | ---         |     | ---        |     | 2.00 (1) TITR         |  |
| S       | %     | ---         |     | ---         |      | ---    | ---         | ---  |     | ---         |     | ---        |     | 2.15 (1) IC           |  |
| Sb      | ng/g  | ---         |     | 11 ± 2      | (3)  | 10     | 10 - 14     | ---  |     | 11 ± 2      | (3) | ---        |     | ---                   |  |
| Sc      | ug/g  | ---         |     | 1.38        | (1)  | ---    | ---         | ---  |     | 1.38        | (1) | ---        |     | ---                   |  |
| Se      | ng/g  | ---         |     | 170 ± 26    | (5)  | 170    | 138 - 200   | ---  |     | 170 ± 26    | (5) | ---        |     | ---                   |  |
| V       | ug/g  | 320 ± 15    |     | 312 ± 11    | (17) | 311    | 283 - 326   | 326  | (1) | 299 ± 20    | (5) | 318 ± 4    | (3) | 309 ± 14 (7) XRF      |  |
| V       | ug/g  | ---         |     | ---         |      | ---    | ---         | ---  |     | ---         |     | ---        |     | 317 (1) GC            |  |
| Zn      | ug/g  | 0.23 ± 0.05 |     | 0.32 ± 0.16 | (3)  | 0.3    | 0.17 - 0.48 | ---  |     | 0.32 ± 0.16 | (3) | ---        |     | ---                   |  |

TABLE 1634-2: INDIVIDUAL DATA FOR NBS SRM 1634 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>As (ng/g)</u> |       |     |        |           | <u>Cu (ng/g)</u> |       |     |        |           |
| 56               |       |     | ITNA   | 77FIL 01  | <                | 800   | L   | EXRF   | 79GIA 01  |
| 62               | 13    |     | ITNA   | 85FIL 02  | 220              | 20    |     | ITNA   | 73SHE 01  |
| 63               | 3     |     | ITNA   | 78BER 02  | <u>Eu (ng/g)</u> |       |     |        |           |
| 70               |       |     | ITNA   | 78WEA 01  | 11               | 4     |     | ITNA   | 85FIL 02  |
| 95               |       |     | RTNA   | 74ORV 01  | <u>Fe (ug/g)</u> |       |     |        |           |
| 120              |       |     | ITNA   | 81SHA 01  | 10.8             | 3.3   | 32  | EXRF   | 78KUB 01  |
| <u>Au (ng/g)</u> |       |     |        |           | 12.3             |       |     | POL    | 74MAI 01  |
| 24.5             | 0.7   |     | ITNA   | 73SHE 01  | 12.4             | 1.6   |     | ITNA   | 73SHE 01  |
| <u>Br (ng/g)</u> |       |     |        |           | 12.5             | 2.2   |     | UU     | 77PAC 01  |
| 39               |       |     | ITNA   | 77FIL 01  | 12.7             | 3     |     | EXRF   | 80SCH 07  |
| 39.1             | 5.3   |     | UU     | 77PAC 01  | 13               |       |     | ICPES  | 79MER 01  |
| 40               |       |     | ITNA   | 78WEA 01  | 13.4             | 0.2   |     | ICPES  | 83BRO 02  |
| 41               | 4     |     | ITNA   | 78BER 02  | 13.5             | 1.2   |     | ITNA   | 81SHA 01  |
| 240              | 70    |     | ITNA   | 73SHE 01  | 14               | 1.5   |     | EXRF   | 79GIA 01  |
| 330              | 90    |     | ITNA   | 85FIL 02  | 14.1             | 0.6   |     | AA     | 74RAI 01  |
| <u>Ca (ug/g)</u> |       |     |        |           | 14.2             | 1.5   |     | ITNA   | 78BER 02  |
| 15               | 2     |     | ITNA   | 73SHE 01  | 14.4             | 1.7   | 32  | EXRF   | 78KUB 01  |
| <u>Cd (ng/g)</u> |       |     |        |           | 15.1             | 2.4   | 32  | EXRF   | 78KUB 01  |
| <                | 10    | L   | RTNA   | 74ORV 01  | 16.2             | 2.8   | 32  | EXRF   | 78KUB 01  |
| 5                |       |     | FAA    | 74RAI 01  | 16.9             | 2.5   | 32  | EXRF   | 78KUB 01  |
| <u>Cl (ug/g)</u> |       |     |        |           | 20               |       |     | ITNA   | 77FIL 01  |
| 7.8              | 0.5   |     | UU     | 77PAC 01  | 20               | 2     |     | ICPES  | 84BAR 03  |
| 8                |       |     | ITNA   | 78WEA 01  | 25               |       |     | ITNA   | 78WEA 01  |
| 8.4              | 0.5   |     | ITNA   | 78BER 02  | 27.5             | 6.5   |     | ITNA   | 85FIL 02  |
| 18               | 0.7   |     | ITNA   | 73SHE 01  | <u>Hg (ng/g)</u> |       |     |        |           |
| <u>Co (ng/g)</u> |       |     |        |           | <                | 10    | L   | ITNA   | 81SHA 01  |
| 250              | 10    |     | ITNA   | 73SHE 01  | <                | 10    |     | ITNA   | 77FIL 01  |
| 301              |       |     | ITNA   | 77FIL 01  | 2.3              | 0.2   |     | RTNA   | 84DEL 01  |
| 301              | 14    |     | UU     | 77PAC 01  | 2.3              | 0.2   |     | RTNA   | 74ORV 01  |
| 310              | 15    |     | ITNA   | 78BER 02  | 22               | 15    |     | ITNA   | 73SHE 01  |
| 330              | 60    |     | ITNA   | 85FIL 02  | <u>K (ug/g)</u>  |       |     |        |           |
| 400              |       |     | ITNA   | 78WEA 01  | 315              |       |     | ITNA   | 77FIL 01  |
| <u>Cr (ng/g)</u> |       |     |        |           | <u>Mn (ng/g)</u> |       |     |        |           |
| 80               |       |     | ITNA   | 81SHA 01  | 110              | 10    |     | ITNA   | 78BER 02  |
| 93               |       |     | ITNA   | 77FIL 01  | 190              |       |     | ITNA   | 73SHE 01  |
| 100              |       |     | ITNA   | 78WEA 01  | 200              |       |     | ITNA   | 81SHA 01  |
| 116              | 35    |     | ITNA   | 73SHE 01  | 320              |       |     | ITNA   | 78WEA 01  |
| 220              | 60    |     | ITNA   | 85FIL 02  | <u>Mo (ng/g)</u> |       |     |        |           |
|                  |       |     |        |           | 870              | 80    |     | ITNA   | 78BER 02  |

TABLE 1634-2: INDIVIDUAL DATA FOR NBS SRM 1634 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Na (ug/g)</u> |       |     |        |           | <u>Sb (ng/g)</u> |       |     |        |           |
| 11.2             |       |     | ITNA   | 77FIL 01  | 10               |       |     | ITNA   | 77FIL 01  |
| 11.2             | 0.7   |     | UU     | 77PAC 01  | 10               |       |     | ITNA   | 78WEA 01  |
| 12               |       |     | ITNA   | 78WEA 01  | 14               | 3     |     | ITNA   | 73SHE 01  |
| 13.2             | 1.5   |     | ITNA   | 78BER 02  | 90               | 110   |     | ITNA   | 85FIL 02  |
| 15.3             | 1.9   |     | ITNA   | 85FIL 02  |                  |       |     |        |           |
| <u>Ni (ug/g)</u> |       |     |        |           | <u>Sc (ug/g)</u> |       |     |        |           |
| 31.1             | 2.1   |     | AA     | 74RAI 01  | 1.38             | 0.76  |     | ITNA   | 85FIL 02  |
| 32               | 1     | 32  | EXRF   | 78KUB 01  | <u>Se (ng/g)</u> |       |     |        |           |
| 32               | 1.6   |     | EXRF   | 79GIA 01  | 138              | 60    |     | RTNA   | 74ORV 01  |
| 32               | 2     | 32  | EXRF   | 78KUB 01  | 151              | 58    |     | ITNA   | 85FIL 02  |
| 33               | 1     | 32  | EXRF   | 78KUB 01  | 170              |       |     | ITNA   | 77FIL 01  |
| 33               | 2.3   |     | ITNA   | 85FIL 02  | 190              | 30    |     | ITNA   | 73SHE 01  |
| 35               | 0.3   |     | ICPES  | 83BRO 02  | 200              |       |     | ITNA   | 78WEA 01  |
| 35               | 2     |     | ICPES  | 84BAR 03  | <u>V (ug/g)</u>  |       |     |        |           |
| 35               | 2     | 32  | EXRF   | 78KUB 01  | 266              | 18    |     | ITNA   | 73SHE 01  |
| 35.2             |       |     | POL    | 74MAI 01  | 283              | 12    |     | EXRF   | 79GIA 01  |
| 36               | 1     | 32  | EXRF   | 78KUB 01  | 300              |       |     | ITNA   | 81SHA 01  |
| 36.7             |       |     | ICPES  | 79MER 01  | 301              | 15    |     | ITNA   | 85FIL 02  |
| 36.9             | 2.7   |     | EXRF   | 80SCH 07  | 303              | 18    | 32  | EXRF   | 78KUB 01  |
| 37               | 2     |     | ITNA   | 78BER 02  | 306              | 24    |     | EXRF   | 80SCH 07  |
| 37.4             |       |     | ITNA   | 77FIL 01  | 310              |       |     | ITNA   | 78WEA 01  |
| 37.4             | 1.5   |     | UU     | 77PAC 01  | 310              | 5     | 32  | EXRF   | 78KUB 01  |
| 38.1             |       | 6   | IDMS   | 74MOO 01  | 311              | 7     | 32  | EXRF   | 78KUB 01  |
| 38.1             |       | 6   | IDMS   | 74MOO 01  | 312              | 16.4  |     | UU     | 77PAC 01  |
| 38.2             |       | 6   | IDMS   | 74MOO 01  | 314              |       |     | ICPES  | 79MER 01  |
| 39.5             | 2.26  |     | ITNA   | 73SHE 01  | 317              | 6     |     | GC     | 81DIL 01  |
| <u>Pb (ng/g)</u> |       |     |        |           | 318              |       |     | ICPES  | 84BAR 03  |
| <                | 500   |     | ICPES  | 79MER 01  | 318              | 15    |     | ITNA   | 78BER 02  |
| <                | 1500  | L   | EXRF   | 79GIA 01  | 323              | 4     |     | ICPES  | 83BRO 02  |
| 41               |       |     | POL    | 74MAI 01  | 323              | 9     | 32  | EXRF   | 78KUB 01  |
| 50               |       |     | FAA    | 74RAI 01  | 325              | 11    | 32  | EXRF   | 78KUB 01  |
| <u>S (%)</u>     |       |     |        |           | 326              | 6.8   |     | AA     | 74RAI 01  |
| 2                | 0.1   |     | TITR   | 80MCC 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| 2                | 0.2   |     | MECA   | 80MCC 01  | <                | 0.6   |     | ICPES  | 79MER 01  |
| 2.04             | 0.39  |     | ITNA   | 73SHE 01  | <                | 0.6   | L   | EXRF   | 79GIA 01  |
| 2.05             | 0.4   |     | UU     | 77PAC 01  | <                | 1     | L   | ITNA   | 81SHA 01  |
| 2.15             | 0.02  |     | ICPES  | 84BAR 03  | 0.17             | 0.02  |     | RTNA   | 74ORV 01  |
| 2.154            | 0.009 |     | IC     | 80MCC 01  | 0.3              |       |     | ITNA   | 78WEA 01  |
| 2.17             |       |     | XRF    | 80MCC 01  | 0.48             | 0.12  |     | ITNA   | 73SHE 01  |
| 2.24             | 0.05  |     | ITNA   | 81SHA 01  | 1.0              | 0.4   |     | ITNA   | 85FIL 02  |
| 2.24             | 0.05  |     | ICPES  | 81WAL 02  |                  |       |     |        |           |
| 2.3              | 0.3   |     | ITNA   | 78BER 02  |                  |       |     |        |           |

TABLE 1634A-1: COMPILED DATA FOR NBS SRM 1634A TRACE METALS IN FUEL OIL (revised 3/1/86)

| ELEMENT | UNITS | NBS         |     | CONSENSUS   |     | MEDIAN | RANGE       | MAA      |        | ICPES      |        | XRF      |            | OTHER METHODS |        |
|---------|-------|-------------|-----|-------------|-----|--------|-------------|----------|--------|------------|--------|----------|------------|---------------|--------|
|         |       | Mean ± SD   | (n) | Mean ± SD   | (n) |        |             | Mean (n) | SD (n) | Mean (n)   | SD (n) | Mean (n) | Method (n) |               |        |
| As      | ng/g  | 120         | (1) | 141         | (1) | ---    | ---         | 141      | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Ba      | ug/g  | ---         | (1) | 5.98        | (1) | ---    | ---         | 5.98     | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Be      | ng/g  | 6           | (1) | ---         | (1) | ---    | ---         | ---      | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Br      | ug/g  | < 1         | (1) | 0.88        | (1) | ---    | ---         | 0.88     | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Ca      | ug/g  | 16          | (2) | 16.8        | (2) | ---    | 16 - 17.5   | ---      | (1)    | 16         | (1)    | 17.5     | (1)        | ---           | ---    |
| Cd      | ng/g  | 2           | (1) | ---         | (1) | ---    | ---         | ---      | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Ce      | ng/g  | ---         | (1) | 757         | (1) | ---    | ---         | 757      | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Cl      | ug/g  | 31          | (2) | 42          | (2) | ---    | 35 - 49.9   | 42.45    | (2)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Co      | ng/g  | 300         | (2) | 440         | (2) | ---    | 280 - 600   | 600      | (1)    | 280        | (1)    | ---      | ---        | ---           | ---    |
| Cr      | ug/g  | 0.7         | (2) | 0.71        | (2) | ---    | 0.6 - 0.82  | 0.82     | (1)    | 0.6        | (1)    | ---      | ---        | ---           | ---    |
| Cs      | ng/g  | ---         | (1) | 22          | (1) | ---    | ---         | 22       | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Cu      | ug/g  | ---         | (1) | < 1         | (1) | ---    | ---         | ---      | (1)    | ---        | < 1    | ---      | ---        | ---           | ---    |
| Eu      | ug/g  | ---         | (1) | 11.6        | (1) | ---    | ---         | 11.6     | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Fe      | ug/g  | 31          | (5) | 32 ± 6      | (5) | 30.8   | 26 - 41     | 41       | (1)    | 28.4       | (2)    | 30.6     | (2)        | ---           | ---    |
| Ga      | ng/g  | ---         | (1) | 106         | (1) | ---    | ---         | 106      | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Hg      | ug/g  | < 2         | (1) | < 1.9       | (1) | ---    | ---         | ---      | (1)    | ---        | < 1.9  | ---      | ---        | ---           | ---    |
| K       | ug/g  | ---         | (1) | < 4.5       | (1) | ---    | ---         | ---      | (1)    | ---        | < 4.5  | ---      | ---        | ---           | ---    |
| La      | ug/g  | ---         | (1) | 2.04        | (1) | ---    | ---         | 2.04     | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Mn      | ng/g  | 190 ± 20    | (2) | 195         | (2) | ---    | 180 - 210   | ---      | (2)    | 195        | (2)    | ---      | ---        | ---           | ---    |
| Mo      | ng/g  | ---         | (1) | 110         | (1) | ---    | ---         | ---      | (1)    | 110        | (1)    | ---      | ---        | ---           | ---    |
| N       | %     | ---         | (1) | 1.23        | (1) | ---    | ---         | ---      | (1)    | ---        | ---    | ---      | 1.23       | (1)           | IC     |
| Na      | ug/g  | 87 ± 4      | (1) | 102         | (1) | ---    | ---         | 102      | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Nd      | ug/g  | ---         | (1) | 0.9         | (1) | ---    | ---         | 0.9      | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Ni      | ug/g  | 29 ± 1      | (8) | 27.5 ± 1.1  | (8) | 27     | 26 - 29.2   | 26.3     | (1)    | 27.6 ± 1.0 | (4)    | 28.4     | (2)        | 26            | (1) AA |
| P       | ug/g  | ---         | (1) | 1090        | (1) | ---    | ---         | ---      | (1)    | 2.68       | (1)    | 1090     | (1)        | ---           | ---    |
| Pb      | ug/g  | 2.8 ± 0.08  | (3) | 2.3 ± 0.3   | (3) | 2.13   | 2.13 - 2.68 | ---      | (2)    | ---        | ---    | 2.13     | (2)        | ---           | ---    |
| Rb      | ng/g  | ---         | (6) | < 610       | (6) | ---    | ---         | ---      | (2)    | ---        | < 610  | ---      | ---        | ---           | ---    |
| S       | %     | 2.85 ± 0.05 | (6) | 2.86 ± 0.03 | (6) | 2.848  | 2.82 - 2.91 | ---      | (2)    | 2.89       | (2)    | 2.86     | (2)        | 2.83          | (2) MM |
| S       | %     | ---         | (1) | ---         | (1) | ---    | ---         | ---      | (1)    | ---        | ---    | ---      | ---        | 2.12          | (1) IC |
| Sb      | ng/g  | ---         | (1) | 34          | (1) | ---    | ---         | 34       | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Sc      | ug/g  | ---         | (1) | 2.3         | (1) | ---    | ---         | 2.3      | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Se      | ng/g  | 150 ± 20    | (1) | 190         | (1) | ---    | ---         | 190      | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Si      | ug/g  | ---         | (1) | < 270       | (1) | ---    | ---         | ---      | (1)    | ---        | < 270  | ---      | ---        | ---           | ---    |
| Sm      | ug/g  | ---         | (1) | 43          | (1) | ---    | ---         | 43       | (1)    | ---        | ---    | ---      | ---        | ---           | ---    |
| Sr      | ug/g  | ---         | (1) | < 4.3       | (1) | ---    | ---         | ---      | (1)    | ---        | < 4.3  | ---      | ---        | ---           | ---    |
| Ti      | ug/g  | ---         | (1) | < 11        | (1) | ---    | ---         | ---      | (1)    | ---        | < 11   | ---      | ---        | ---           | ---    |
| V       | ug/g  | 56 ± 2      | (8) | 55.6 ± 1.6  | (8) | 55.5   | 54 - 58.5   | 58.5     | (1)    | 56.2 ± 0.8 | (4)    | 54       | (2)        | 54            | (1) AA |
| Zn      | ug/g  | 2.7 ± 0.2   | (5) | 2.83 ± 0.17 | (5) | 2.89   | 2.54 - 3.0  | 2.89     | (1)    | 2.67       | (2)    | 2.95     | (2)        | ---           | ---    |

TABLE 1634A-2: INDIVIDUAL DATA FOR NBS SRM 1634A (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>As (ng/g)</u> |       |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| <                | 650   | 32  | EXRF   | 83SAN 02  | <                | 1     | 32  | EXRF   | 83SAN 02  |
| <                | 650   | 32  | EXRF   | 83SAN 02  | <                | 1     | 32  | EXRF   | 83SAN 02  |
| 141              | 17    |     | ITNA   | 85FIL 02  |                  |       |     |        |           |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Eu (ug/g)</u> |       |     |        |           |
| 5.98             | 1.77  |     | ITNA   | 85FIL 02  | 11.6             | 5.5   |     | ITNA   | 85FIL 02  |
| <u>Br (ug/g)</u> |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| <                | 0.5   | 32  | EXRF   | 83SAN 02  | 26               | 4     |     | ICPES  | 84BAR 03  |
| <                | 0.5   | 32  | EXRF   | 83SAN 02  | 30.4             | 1.1   | 32  | EXRF   | 83SAN 02  |
| 0.88             | 0.19  |     | ITNA   | 85FIL 02  | 30.8             | 0.4   |     | ICPES  | 83MAH 05  |
|                  |       |     |        |           | 30.8             | 1.1   | 32  | EXRF   | 83SAN 02  |
|                  |       |     |        |           | 41               | 7.2   |     | ITNA   | 85FIL 02  |
| <u>Ca (ug/g)</u> |       |     |        |           | <u>Ga (ng/g)</u> |       |     |        |           |
| <                | 42    | 32  | EXRF   | 83SAN 02  | <                | 450   | 32  | EXRF   | 83SAN 02  |
| 16               | 1     |     | ICPES  | 84BAR 03  | <                | 450   | 32  | EXRF   | 83SAN 02  |
| 17.5             | 2.2   | 32  | EXRF   | 83SAN 02  | 106              | 25    |     | ITNA   | 85FIL 02  |
| <u>Ce (ng/g)</u> |       |     |        |           | <u>Hg (ug/g)</u> |       |     |        |           |
| 757              | 64    |     | ITNA   | 85FIL 02  | <                | 1.9   | 32  | EXRF   | 83SAN 02  |
|                  |       |     |        |           | <                | 1.9   | 32  | EXRF   | 83SAN 02  |
| <u>Cl (ug/g)</u> |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| <                | 68    | 32  | EXRF   | 83SAN 02  | <                | 4.5   | 32  | EXRF   | 83SAN 02  |
| <                | 350   | 32  | EXRF   | 83SAN 02  | <                | 66    | 32  | EXRF   | 83SAN 02  |
| 35               |       |     | ITNA   | 86GAU 01  |                  |       |     |        |           |
| 49.9             | 3.4   |     | ITNA   | 83LI 01   |                  |       |     |        |           |
| <u>Co (ng/g)</u> |       |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| <                | 1400  | 32  | EXRF   | 83SAN 02  | 2.04             | 0.18  |     | ITNA   | 85FIL 02  |
| <                | 1400  | 32  | EXRF   | 83SAN 02  |                  |       |     |        |           |
| 280              | 60    |     | ICPES  | 83MAH 05  |                  |       |     |        |           |
| 600              | 370   |     | ITNA   | 85FIL 02  |                  |       |     |        |           |
| <u>Cr (ug/g)</u> |       |     |        |           | <u>Mn (ng/g)</u> |       |     |        |           |
| <                | 4.8   | 32  | EXRF   | 83SAN 02  | <                | 2600  | 32  | EXRF   | 83SAN 02  |
| <                | 4.8   | 32  | EXRF   | 83SAN 02  | <                | 2600  | 32  | EXRF   | 83SAN 02  |
| 0.6              |       |     | ICPES  | 85NG 01   | 180              | 4     |     | ICPES  | 83MAH 05  |
| 0.82             | 0.11  |     | ITNA   | 85FIL 02  | 210              |       |     | ICPES  | 85NG 01   |
| <u>Cs (ng/g)</u> |       |     |        |           | <u>Mo (ng/g)</u> |       |     |        |           |
| 22               | 9     |     | ITNA   | 85FIL 02  | 110              | 3     |     | ICPES  | 83MAH 05  |
|                  |       |     |        |           |                  |       |     |        |           |
|                  |       |     |        |           | <u>N (%)</u>     |       |     |        |           |
|                  |       |     |        |           | 1.23             | 0.02  |     | IC     | 83NAD 01  |

TABLE 1634A-2: INDIVIDUAL DATA FOR NBS SRM 1634A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Na (ug/g)</u> |       |     |        |           | <u>Sc (ug/g)</u> |       |     |        |           |
| 102              | 16    |     | ITNA   | 85FIL 02  | 2.3              | 1.6   |     | ITNA   | 85FIL 02  |
| <u>Nd (ug/g)</u> |       |     |        |           | <u>Se (ng/g)</u> |       |     |        |           |
| 0.9              | 0.26  |     | ITNA   | 85FIL 02  | <                | 540   | 32  | EXRF   | 83SAN 02  |
| <u>Ni (ug/g)</u> |       |     |        |           | <                | 540   | 32  | EXRF   | 83SAN 02  |
| 26               |       |     | AA     | 85FAB 01  | 190              | 50    |     | ITNA   | 85FIL 02  |
| 26.3             | 2.5   |     | ITNA   | 85FIL 02  | <u>Si (ug/g)</u> |       |     |        |           |
| 27               |       |     | ICPES  | 85NG 01   | <                | 270   | 32  | EXRF   | 83SAN 02  |
| 27               | 2     |     | ICPES  | 84BAR 03  | <                | 3000  | 32  | EXRF   | 83SAN 02  |
| 27.3             | 0.4   |     | ICPES  | 85FAB 01  | <u>Sm (ug/g)</u> |       |     |        |           |
| 28.4             | 1.3   | 32  | EXRF   | 83SAN 02  | 43               | 3.8   |     | ITNA   | 85FIL 02  |
| 28.5             | 1.3   | 32  | EXRF   | 83SAN 02  | <u>Sr (ug/g)</u> |       |     |        |           |
| 29.2             | 0.5   |     | ICPES  | 83MAH 05  | <                | 4.3   | 32  | EXRF   | 83SAN 02  |
| <u>P (ug/g)</u>  |       |     |        |           | <                | 4.3   | 32  | EXRF   | 83SAN 02  |
| <                | 1500  | 32  | EXRF   | 83SAN 02  | <                | 4.3   | 32  | EXRF   | 83SAN 02  |
| 1090             | 53    | 32  | EXRF   | 83SAN 02  | <u>Ti (ug/g)</u> |       |     |        |           |
| <u>Pb (ug/g)</u> |       |     |        |           | <                | 11    | 32  | EXRF   | 83SAN 02  |
| 2.13             | 0.87  | 32  | EXRF   | 83SAN 02  | <                | 11    | 32  | EXRF   | 83SAN 02  |
| 2.13             | 0.87  | 32  | EXRF   | 83SAN 02  | <u>V (ug/g)</u>  |       |     |        |           |
| 2.68             | 0.03  |     | ICPES  | 83MAH 05  | 54               |       |     | AA     | 85FAB 01  |
| <u>Rb (ng/g)</u> |       |     |        |           | 54               | 4     | 32  | EXRF   | 83SAN 02  |
| <                | 610   | 32  | EXRF   | 83SAN 02  | 54               | 4     | 32  | EXRF   | 83SAN 02  |
| <                | 610   | 32  | EXRF   | 83SAN 02  | 54               |       |     | ICPES  | 85NG 01   |
| <u>S (%)</u>     |       |     |        |           | 55.5             |       |     | ICPES  | 83MAH 05  |
| 2.12             | 0.01  |     | IC     | 83NAD 01  | 55.5             | 1     |     | ICPES  | 83MAH 05  |
| 2.82             | 0.1   | 7   | NM     | 83LI 01   | 56.7             | 0.7   |     | ICPES  | 85FAB 01  |
| 2.84             | 0.08  | 7   | NM     | 83LI 01   | 57               | 2     |     | ICPES  | 84BAR 03  |
| 2.848            | 0.09  | 32  | EXRF   | 83SAN 02  | 58.5             | 5     |     | ITNA   | 85FIL 02  |
| 2.87             | 0.02  |     | ICPES  | 85FAB 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| 2.881            | 0.027 | 32  | EXRF   | 83SAN 02  | 2.54             | 0.03  |     | ICPES  | 83MAH 05  |
| 2.91             | 0.02  |     | ICPES  | 84BAR 03  | 2.8              | 0.3   |     | ICPES  | 84BAR 03  |
| <u>Sb (ng/g)</u> |       |     |        |           | 2.89             | 0.92  |     | ITNA   | 85FIL 02  |
| 34               | 31    |     | ITNA   | 85FIL 02  | 2.9              | 0.5   | 32  | EXRF   | 83SAN 02  |
|                  |       |     |        |           | 3                | 0.5   | 32  | EXRF   | 83SAN 02  |

TABLE 1634B-1: COMPILED DATA FOR NBS SRM 1634B TRACE ELEMENTS IN FUEL OIL  
(revised 3/1/86)

| ELEMENT | UNITS  | NBS         |    |
|---------|--------|-------------|----|
|         |        | Mean        | SD |
| ASH     | ug/g   | 700         |    |
| Al      | ug/g   | 16          |    |
| As      | ng/g   | 120 ± 20    |    |
| Ba      | ug/g   | 1.3         |    |
| Ca      | ug/g   | 15          |    |
| Co      | ng/g   | 320 ± 40    |    |
| Cr      | ug/g   | 0.7         |    |
| Fe      | ug/g   | 31.6 ± 2.0  |    |
| HEAT    | BTU/lb | 18100       |    |
| Hg      | ng/g   | < 1         |    |
| Mn      | ng/g   | 230 ± 30    |    |
| Na      | ug/g   | 90          |    |
| Ni      | ug/g   | 28 ± 2      |    |
| Pb      | ug/g   | 2.8         |    |
| S       | %      | 2.80 ± 0.05 |    |
| Se      | ng/g   | 180 ± 40    |    |
| V       | ug/g   | 55.4 ± 1.1  |    |
| Zn      | ug/g   | 3.0 ± 0.2   |    |

TABLE 1635-1: COMPILED DATA FOR NBS SRM 1635 TRACE ELEMENTS IN COAL (revised 3/1/86)

| ELEMENT | UNITS | NBS       |      | CONSENSUS   |      | MEDIAN | RANGE       | AA          |      | NAA         |     | OTHER METHODS |               |
|---------|-------|-----------|------|-------------|------|--------|-------------|-------------|------|-------------|-----|---------------|---------------|
|         |       | Mean ± SD | (n)  | Mean ± SD   | (n)  |        |             | Mean ± SD   | (n)  | Mean ± SD   | (n) | Method        | Mean ± SD     |
| ASH     | %     | ---       | (2)  | 4.65        | (2)  | ---    | 4.5 - 4.8   | ---         | ---  | 4.8         | (1) | CB            | ---           |
| Ag      | ng/g  | ---       | (11) | < 38        | (11) | ---    | ---         | ---         | < 38 | < 2500      | (6) | XRF           | ---           |
| Al      | ug/g  | 3200      | (11) | 2950 ± 270  | (11) | 2960   | 2600 - 3400 | 2750        | (2)  | 2930 ± 170  | (6) | ICPES         | 3400 (1) TCGS |
| As      | ng/g  | 420 ± 150 | (11) | 404 ± 76    | (11) | 400    | 280 - 530   | 360 ± 56    | (5)  | 460 ± 60    | (5) | ---           | 330 (1) AF    |
| Au      | ng/g  | ---       | (3)  | < 6         | (3)  | ---    | ---         | ---         | < 6  | ---         | (1) | ---           | ---           |
| B       | ug/g  | ---       | (7)  | 115 ± 17    | (7)  | 105    | 104.5 - 135 | ---         | (1)  | 135         | (1) | ---           | 105 (2) TCGS  |
| Ba      | ug/g  | ---       | (3)  | 73 ± 5      | (3)  | 72     | 67 - 81     | ---         | (6)  | 72 ± 4      | (6) | XRF           | ---           |
| Be      | ug/g  | ---       | (3)  | 0.48 ± 0.02 | (3)  | 0.49   | 0.46 - 0.49 | 0.48 ± 0.02 | (3)  | ---         | (1) | ---           | ---           |
| Bi      | ug/g  | ---       | (6)  | < 1         | (6)  | ---    | ---         | ---         | (6)  | ---         | (6) | XRF           | ---           |
| Br      | ug/g  | ---       | (2)  | 1.4 ± 0.4   | (2)  | 1.22   | 0.84 - 1.90 | ---         | (6)  | 1.4 ± 0.4   | (6) | ---           | ---           |
| C       | %     | ---       | (11) | 62.6        | (11) | ---    | 59 - 66.23  | ---         | (2)  | ---         | (2) | CB            | 59 (1) TCGS   |
| Ca      | ug/g  | ---       | (1)  | 5350 ± 340  | (1)  | 5400   | 4800 - 5834 | 5600        | (2)  | 5220 ± 350  | (6) | ICPES         | 5400 (1) TCGS |
| Cd      | ng/g  | 30 ± 10   | (6)  | 29          | (6)  | ---    | ---         | ---         | (1)  | 29          | (1) | ---           | ---           |
| Ce      | ug/g  | 3.6       | (4)  | 3.40 ± 0.14 | (4)  | 3.4    | 3.2 - 3.60  | ---         | (6)  | 3.40 ± 0.14 | (6) | ---           | ---           |
| Cl      | ug/g  | ---       | (9)  | 26.8 ± 1.0  | (9)  | 26     | 26 - 28     | ---         | (2)  | 26.5        | (2) | IC            | 26 (1) TCGS   |
| Co      | ng/g  | 650       | (12) | 621 ± 19    | (12) | 620    | 590 - 650   | 610         | (2)  | 624 ± 20    | (7) | XRF           | ---           |
| Cr      | ug/g  | 2.5 ± 0.3 | (3)  | 2.3 ± 0.3   | (3)  | 2.48   | 1.9 - 2.9   | 2.7 ± 0.7   | (4)  | 2.3 ± 0.2   | (8) | XRF           | ---           |
| Cs      | ng/g  | ---       | (6)  | 53 ± 7      | (6)  | 53     | 46 - 60     | ---         | (3)  | 53 ± 7      | (3) | ---           | ---           |
| Cu      | ug/g  | 3.6 ± 0.3 | (2)  | 3.60 ± 0.05 | (2)  | 3.6    | 3.56 - 3.70 | 3.62 ± 0.05 | (4)  | 3.56        | (2) | XRF           | ---           |
| Dy      | ng/g  | ---       | (4)  | 330         | (4)  | ---    | 310 - 350   | ---         | (2)  | 330         | (2) | ---           | ---           |
| Er      | ng/g  | ---       | (3)  | < 2000      | (3)  | ---    | ---         | ---         | (4)  | < 2000      | (4) | XRF           | ---           |
| Eu      | ng/g  | 60        | (3)  | 62 ± 3      | (3)  | 61     | 59 - 66     | ---         | (7)  | 62 ± 3      | (7) | ---           | ---           |
| F       | ug/g  | ---       | (11) | 53 ± 30     | (11) | 63     | 20 - 77     | ---         | (2)  | ---         | (2) | IC            | 41.5 (2) ISE  |
| Fe      | ug/g  | 2390 ± 50 | (3)  | 2290 ± 60   | (3)  | 2300   | 2180 - 2380 | 2300        | (7)  | 2280 ± 60   | (7) | ICPES         | 2200 (1) TCGS |
| Ga      | ug/g  | 1.05      | (1)  | 1.1         | (1)  | ---    | ---         | ---         | (1)  | ---         | (1) | XRF           | ---           |
| Gd      | ng/g  | ---       | (3)  | 340 ± 105   | (3)  | 350    | 230 - 440   | ---         | (1)  | 440         | (1) | ---           | ---           |
| Ge      | ug/g  | ---       | (2)  | 0.5         | (2)  | ---    | ---         | ---         | (6)  | ---         | (6) | ---           | ---           |
| H       | %     | ---       | (2)  | 4.07        | (2)  | ---    | 3.96 - 4.18 | ---         | (1)  | ---         | (1) | ---           | ---           |
| H2O-    | %     | ---       | (6)  | 15.4        | (6)  | ---    | 14 - 16.8   | ---         | (1)  | ---         | (1) | ---           | ---           |
| Hf      | ng/g  | 290       | (2)  | 288 ± 33    | (2)  | 290    | 240 - 340   | ---         | (6)  | 288 ± 33    | (6) | ---           | ---           |
| Hg      | ng/g  | ---       | (2)  | 20          | (2)  | ---    | 5 - 35      | 5           | (1)  | 35          | (1) | ---           | ---           |
| Ho      | ng/g  | ---       | (1)  | 49          | (1)  | ---    | ---         | ---         | (1)  | 49          | (1) | ---           | ---           |

TABLE 1635-1: COMPILED DATA FOR NBS SRM 1635 TRACE ELEMENTS IN COAL (cont.)

| ELEMENT       | UNITS | NBS         |      | CONSENSUS   |      | MEDIAN | RANGE         | AA          |     | NAA         |     | OTHER METHODS |           |          |
|---------------|-------|-------------|------|-------------|------|--------|---------------|-------------|-----|-------------|-----|---------------|-----------|----------|
|               |       | Mean ± SD   | (n)  | Mean ± SD   | (n)  |        |               | Mean ± SD   | (n) | Mean ± SD   | (n) | Method        | Mean ± SD | (n)      |
| I             | ng/g  | ---         | (1)  | 600         | (1)  | ---    | ---           | ---         | --- | 600         | (1) | ---           | ---       |          |
| In            | ng/g  | ---         | (1)  | 5           | (1)  | ---    | ---           | ---         | --- | 5           | (1) | ---           | ---       |          |
| K             | ug/g  | ---         | (6)  | 96 ± 16     | (6)  | 97     | 70 - 120      | 100         | (2) | 105         | (2) | 70            | (1) ICPEs |          |
| La            | ug/g  | ---         | (7)  | 1.8 ± 0.3   | (7)  | 1.93   | 1.38 - 2.10   | ---         | --- | 1.8 ± 0.3   | (6) | 2             | (1) XRF   |          |
| Li            | ug/g  | ---         | (1)  | 0.83        | (1)  | ---    | ---           | ---         | --- | ---         | --- | 0.83          | (1) ICPEs |          |
| Lu            | ng/g  | ---         | (4)  | 28 ± 9      | (4)  | 27     | 15 - 36       | ---         | --- | 28 ± 9      | (4) | ---           | ---       |          |
| Mg            | ug/g  | ---         | (6)  | 1040 ± 130  | (6)  | 1000   | 940 - 1300    | 1000        | (2) | 1080 ± 190  | (3) | 1013          | (1) ICPEs |          |
| Mn            | ug/g  | 21.4 ± 1.5  | (13) | 21.4 ± 1.5  | (13) | 21.8   | 19 - 24       | 21.8 ± 0.7  | (4) | 20.4 ± 1.3  | (6) | 23            | (1) XRF   |          |
| Mn            | ug/g  | ---         | (12) | ---         | (12) | ---    | ---           | ---         | --- | ---         | --- | 24            | (1) TCGS  |          |
| Mo            | ng/g  | ---         | (1)  | 270         | (1)  | ---    | ---           | ---         | --- | 270         | (1) | ---           | ---       |          |
| N             | %     | ---         | (3)  | 1.16 ± 0.32 | (3)  | 1.0    | 0.95 - 1.52   | ---         | --- | ---         | --- | 0.95          | (1) IC    |          |
| N             | %     | ---         | (3)  | ---         | (3)  | ---    | ---           | ---         | --- | ---         | --- | 1.52          | (1) CB    |          |
| Na            | ug/g  | 2400        | (12) | 2390 ± 200  | (12) | 2400   | 2070 - 2800   | 2900        | (2) | 2350 ± 80   | (7) | 2180          | (2) ICPEs |          |
| Na            | ug/g  | ---         | (12) | ---         | (12) | ---    | ---           | ---         | --- | ---         | --- | 2700          | (1) TCGS  |          |
| Nb            | ug/g  | ---         | (1)  | < 1         | (1)  | ---    | ---           | ---         | --- | ---         | --- | < 1           | XRF       |          |
| Nd            | ug/g  | ---         | (2)  | 1.38        | (2)  | ---    | 1.35 - 1.40   | ---         | --- | 1.38        | (2) | ---           | ---       |          |
| Ni            | ug/g  | 1.74 ± 0.10 | (6)  | 1.8 ± 0.2   | (6)  | 1.8    | 1.5 - 2.20    | 1.8 ± 0.30  | (4) | 1.78        | (2) | 3             | (1) XRF   |          |
| O             | %     | ---         | (3)  | 30 ± 8      | (3)  | 33     | 20.79 - 34.99 | ---         | --- | ---         | --- | ---           | ---       |          |
| P             | ug/g  | ---         | (2)  | 61.5        | (2)  | ---    | 60 - 63       | ---         | --- | ---         | --- | ---           | ---       |          |
| Pb            | ug/g  | 1.9 ± 0.2   | (6)  | 1.9 ± 0.4   | (6)  | 1.9    | 1.48 - 2.60   | 1.82 ± 0.20 | (5) | ---         | --- | 2.6           | (1) XRF   |          |
| Pb-210        | pCi/g | ---         | (1)  | 0.0699      | (1)  | ---    | ---           | ---         | --- | ---         | --- | ---           | 0.0699    | (1) NM   |
| Pr            | ug/g  | ---         | (1)  | < 1         | (1)  | ---    | ---           | ---         | --- | < 4.3       | (3) | < 1           | XRF       |          |
| Rb            | ug/g  | ---         | (3)  | 0.85 ± 0.10 | (3)  | 0.83   | 0.76 - 0.95   | ---         | --- | 0.85 ± 0.10 | (3) | ---           | ---       |          |
| S             | ug/g  | 3300 ± 300  | (8)  | 3360 ± 245  | (8)  | 3300   | 2880 - 3640   | ---         | --- | ---         | --- | 2880          | (1) ICPEs |          |
| S             | ug/g  | ---         | (8)  | ---         | (8)  | ---    | ---           | ---         | --- | ---         | --- | 3300          | (1) IC    |          |
| S             | ug/g  | ---         | (1)  | ---         | (1)  | ---    | ---           | ---         | --- | ---         | --- | 3200          | (1) TCGS  |          |
| S-32/34 ratio | ratio | ---         | (1)  | 22.546      | (1)  | ---    | ---           | ---         | --- | ---         | --- | ---           | ---       |          |
| S-33/34 ratio | ratio | ---         | (1)  | 0.1778      | (1)  | ---    | ---           | ---         | --- | ---         | --- | ---           | 0.1778    | (1) IDMS |

TABLE 1635-1: COMPILED DATA FOR NBS SRM 1635 TRACE ELEMENTS IN COAL (cont.)

| ELEMENT | UNITS | NBS<br>Mean ± SD | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE       | AA              |                 | NAA           |           | OTHER METHODS |               |
|---------|-------|------------------|----------------------------|--------|-------------|-----------------|-----------------|---------------|-----------|---------------|---------------|
|         |       |                  |                            |        |             | Mean ± SD (n)   | SD (n)          | Mean ± SD (n) | SD (n)    | Method        | Mean ± SD (n) |
| Sb      | ng/g  | 140              | 150 ± 30 (10)              | 140    | 120 - 200   | 177 ± 40 (3)    | 144 ± 17 (7)    | ---           | ---       | ---           | ---           |
| Sc      | ng/g  | 630              | 630 ± 50 (6)               | 610    | 560 - 700   | ---             | 630 ± 50 (6)    | ---           | ---       | ---           | ---           |
| Se      | ug/g  | 0.9 ± 0.3        | 0.94 ± 0.09 (14)           | 0.97   | 0.79 - 1.10 | 0.92 ± 0.09 (5) | 0.95 ± 0.10 (8) | 1.2           | (1) XRF   | 0.9           | (1) AF        |
| Si      | ug/g  | ---              | 5900 ± 500 (5)             | 6000   | 5200 - 6500 | 6100 (2)        | ---             | 6500          | (1) ICPES | 5600          | (1) 14NAA     |
| Si      | ug/g  | ---              | ---                        | ---    | ---         | ---             | ---             | 5200          | (1) TCGS  | ---           | ---           |
| Sm      | ng/g  | ---              | 290 ± 40 (7)               | 270    | 250 - 340   | ---             | 290 ± 40 (6)    | 250           | (1) TCGS  | ---           | ---           |
| Sn      | ng/g  | ---              | < 600                      | ---    | ---         | ---             | ---             | < 600         | XRF       | ---           | ---           |
| Sr      | ug/g  | ---              | 121 ± 19 (5)               | 127    | 90 - 140    | ---             | 125 ± 6 (3)     | 90            | (1) ICPES | 140           | (1) XRF       |
| Ta      | ng/g  | ---              | 45.8 ± 1.7 (4)             | 45     | 44 - 48     | ---             | 45.8 ± 1.7 (4)  | ---           | ---       | ---           | ---           |
| Tb      | ng/g  | ---              | 42 (2)                     | ---    | 35 - 50     | ---             | 42.5 (2)        | ---           | ---       | ---           | ---           |
| Te      | ng/g  | ---              | < 290                      | ---    | ---         | ---             | < 290           | < 600         | XRF       | ---           | ---           |
| Th      | ng/g  | 620 ± 40         | 610 ± 30 (7)               | 630    | 560 - 640   | ---             | 610 ± 30 (7)    | ---           | ---       | ---           | ---           |
| Th-228  | pCi/g | ---              | 0.0648 (1)                 | ---    | ---         | ---             | ---             | 0.0648        | (1) NM    | ---           | ---           |
| Th-230  | pCi/g | ---              | 0.0765 (1)                 | ---    | ---         | ---             | ---             | 0.0765        | (1) NM    | ---           | ---           |
| Th-232  | pCi/g | ---              | 0.0619 (1)                 | ---    | ---         | ---             | ---             | 0.0619        | (1) NM    | ---           | ---           |
| Ti      | ug/g  | 200              | 202 ± 6 (9)                | 200    | 190 - 210   | ---             | 207 ± 6 (3)     | 201           | (1) ICPES | 204           | (2) XRF       |
| Ti      | ug/g  | ---              | ---                        | ---    | ---         | ---             | ---             | 200           | (2) CGLOR | 190           | (1) TCGS      |
| Tl      | ng/g  | ---              | < 1000                     | ---    | ---         | ---             | ---             | < 1000        | XRF       | ---           | ---           |
| Tm      | ng/g  | ---              | 63 (1)                     | ---    | ---         | ---             | 63 (1)          | ---           | ---       | ---           | ---           |
| U       | ng/g  | 240 ± 20         | 250 ± 40 (5)               | 240    | 200 - 320   | ---             | 250 ± 50 (5)    | ---           | ---       | ---           | ---           |
| U-234   | pCi/g | ---              | 0.0719 (1)                 | ---    | ---         | ---             | ---             | 0.0719        | (1) NM    | ---           | ---           |
| U-235   | pCi/g | ---              | 0.0049 (1)                 | ---    | ---         | ---             | ---             | 0.0049        | (1) NM    | ---           | ---           |
| U-238   | pCi/g | ---              | 0.0731 (1)                 | ---    | ---         | ---             | ---             | 0.0731        | (1) NM    | ---           | ---           |
| V       | ug/g  | 5.2 ± 0.5        | 4.5 ± 0.6 (10)             | 4.5    | 3.5 - 6.7   | 5.6 ± 1.4 (5)   | 4.5 ± 0.3 (6)   | 4             | (1) XRF   | ---           | ---           |
| W       | ng/g  | ---              | 190 (2)                    | ---    | 173 - 210   | ---             | 192 (2)         | ---           | ---       | ---           | ---           |
| Y       | ug/g  | ---              | 1.9 (1)                    | ---    | ---         | ---             | ---             | 1.9           | (1) XRF   | ---           | ---           |
| Yb      | ng/g  | ---              | 165 ± 16 (5)               | 170    | 140 - 179   | ---             | 165 ± 16 (5)    | ---           | ---       | ---           | ---           |
| Zn      | ug/g  | 4.7 ± 0.5        | 5.8 ± 1.2 (9)              | 5.4    | 4.2 - 7.8   | 4.8 ± 0.4 (4)   | 6.8 ± 1.1 (4)   | 5.6           | (1) XRF   | ---           | ---           |
| Zr      | ug/g  | ---              | 16 ± 2 (4)                 | 15.7   | 15 - 19.4   | ---             | 17 ± 2 (3)      | 15            | (1) XRF   | ---           | ---           |

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Ba (ug/g)</u> |       |     |        |           |
| <                | 38    | L   | ITNA   | 82SUZ 02  | 47               | 2     |     | ICPES  | 84NAD 01  |
| <                | 500   |     | ITNA   | 86GLA 01  | 67               | 20    | 9   | ITNA   | 82SUZ 02  |
| <                | 2500  | L   | WXRF   | 82MIL 01  | 69               | 6     |     | ITNA   | 85GAU 04  |
| <u>Al (ug/g)</u> |       |     |        |           | 70               | 9     |     | ITNA   | 80GER 01  |
| 2600             |       |     | ITNA   | 84CLE 01  | 72               | 17    | 5   | ITNA   | 80TOU 01  |
| 2600             | 100   |     | ICPES  | 84NAD 01  | 74               | 18    |     | ITNA   | 84SUZ 02  |
| 2700             |       | 34  | AA     | 83BET 01  | 77               | 24    | 9   | ITNA   | 82SUZ 02  |
| 2800             | 500   | 34  | AA     | 83BET 01  | 81               |       | 34  | WXRF   | 82MIL 01  |
| 2900             | 200   |     | ITNA   | 86GLA 01  | <u>Be (ug/g)</u> |       |     |        |           |
| 2960             | 170   |     | ITNA   | 85GAU 04  | 0.46             | 0.04  | 11  | AA     | 82LIN 03  |
| 3000             | 300   |     | ITNA   | 82SUZ 02  | 0.49             | 0.01  | 11  | AA     | 82LIN 03  |
| 3000             | 300   |     | ITNA   | 80GER 01  | 0.49             | 0.05  | 11  | AA     | 82LIN 03  |
| 3100             | 100   |     | ITNA   | 82HAM 01  | <u>Bi (ug/g)</u> |       |     |        |           |
| 3352             | 25    |     | ICPES  | 85PEA 01  | <                | 1     | L   | WXRF   | 82MIL 01  |
| 3400             | 400   | D   | TCGS   | 80GER 01  | <u>Br (ug/g)</u> |       |     |        |           |
| 3400             | 400   | D   | TCGS   | 80AND 01  | <                | 1     |     | ITNA   | 86GLA 01  |
| 3400             | 400   |     | TCGS   | 79FAI 01  | 0.84             | 0.14  |     | ITNA   | 85GAU 04  |
| <u>As (ng/g)</u> |       |     |        |           | 1.07             | 0.17  |     | ITNA   | 82SUZ 02  |
| 280              | 20    |     | HAA    | 82NAD 01  | 1.22             | 0.24  |     | ITNA   | 84SUZ 02  |
| 320              |       |     | FAA    | 82WIL 01  | 1.5              | 0.07  |     | ITNA   | 82HAM 01  |
| 330              |       |     | AF     | 82WIL 01  | 1.6              | 0.3   |     | ITNA   | 80GER 01  |
| 400              |       | 11  | HAA    | 82CRO 03  | 1.9              | 0.2   | 5   | ITNA   | 80TOU 01  |
| 400              |       | 11  | HAA    | 82CRO 03  | 3                |       | 34  | WXRF   | 82MIL 01  |
| 400              | 50    |     | ITNA   | 82SUZ 02  | <u>C (%)</u>     |       |     |        |           |
| 400              | 100   |     | HAA    | 85LIN 02  | 59               | 3     |     | TCGS   | 79FAI 01  |
| 430              | 40    |     | RTNA   | 84DEL 01  | 59               | 3     | D   | TCGS   | 80GER 01  |
| 440              | 50    |     | RTNA   | 78GAL 01  | 59               | 3     | D   | TCGS   | 80AND 01  |
| 510              | 40    |     | ITNA   | 85GAU 04  | 66.23            | 0.06  |     | CB     | 80SCH 02  |
| 530              | 50    |     | ITNA   | 82HAM 01  | <u>Ca (ug/g)</u> |       |     |        |           |
| 700              |       | 34  | WXRF   | 82MIL 01  | 4800             |       |     | ITNA   | 84CLE 01  |
| 700              | 400   |     | ITNA   | 80GER 01  | 4900             | 500   |     | ITNA   | 82HAM 01  |
| <u>ASH (%)</u>   |       |     |        |           | 5090             | 30    |     | ICPES  | 84NAD 01  |
| 4.5              |       |     | UU     | 85SHI 01  | 5100             | 500   |     | ITNA   | 86GLA 01  |
| 4.8              |       | 34  | CB     | 82MIL 01  | 5300             | 250   |     | ITNA   | 85GAU 04  |
| <u>Au (ng/g)</u> |       |     |        |           | 5400             | 200   | D   | TCGS   | 80AND 01  |
| <                | 6     |     | ITNA   | 86GLA 01  | 5400             | 200   |     | TCGS   | 79FAI 01  |
| <u>B (ug/g)</u>  |       |     |        |           | 5400             | 200   | D   | TCGS   | 80GER 01  |
| 104.5            | 2.6   |     | TCGS   | 79FAI 01  | 5500             | 400   | 34  | AA     | 83BET 01  |
| 105              | 3     | D   | TCGS   | 80GER 01  | 5500             | 900   |     | ITNA   | 82SUZ 02  |
| 105              | 3     |     | TCGS   | 80AND 01  | 5700             |       | 34  | AA     | 83BET 01  |
| 135              | 11    |     | ITNA   | 82SCH 05  | 5700             | 700   |     | ITNA   | 80GER 01  |
|                  |       |     |        |           | 5834.4           |       |     | ICPES  | 85PEA 01  |

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Cd (ng/g)</u> |       |     |        |           | <u>Cr (ug/g) cont.</u> |       |     |        |           |
| <                | 380   | L   | ITNA   | 82SUZ 02  | 2.55                   | 0.17  |     | ITNA   | 85GAU 04  |
| <                | 450   |     | ITNA   | 84SUZ 02  | 2.6                    |       | 34  | FAA    | 83BET 01  |
| <                | 3000  | L   | WXRF   | 82MIL 01  | 2.6                    | 0.3   | 12  | ITNA   | 82SUZ 02  |
| 29               | 3     |     | RTNA   | 78GAL 01  | 2.9                    | 0.6   | 34  | FAA    | 83BET 01  |
|                  |       |     |        |           | 3.5                    | 0.9   | 11  | AA     | 82LIN 03  |
|                  |       |     |        |           | 4                      | 1     |     | ITNA   | 86GLA 01  |
| <u>Ce (ug/g)</u> |       |     |        |           | <u>Cs (ng/g)</u>       |       |     |        |           |
| 3.2              | 0.3   |     | ITNA   | 84SUZ 02  | <                      | 500   | L   | WXRF   | 82MIL 01  |
| 3.3              | 0.2   | 12  | ITNA   | 82SUZ 02  | <                      | 2100  |     | ITNA   | 84SUZ 02  |
| 3.4              | 0.2   | 12  | ITNA   | 82SUZ 02  | 46                     | 5     |     | ITNA   | 80GER 01  |
| 3.4              | 0.3   |     | ITNA   | 85GAU 04  | 53                     | 6     |     | ITNA   | 82SUZ 02  |
| 3.5              | 0.5   |     | ITNA   | 80GER 01  | 60                     | 10    |     | ITNA   | 85GAU 04  |
| 3.6              | 0.86  |     | ITNA   | 82HAM 01  |                        |       |     |        |           |
| 8                |       | 34  | WXRF   | 82MIL 01  |                        |       |     |        |           |
| <u>Cl (ug/g)</u> |       |     |        |           | <u>Cu (ug/g)</u>       |       |     |        |           |
| 26               | 2     | D   | TCGS   | 80GER 01  | 3                      |       | 34  | WXRF   | 82MIL 01  |
| 26               | 2     | D   | TCGS   | 80AND 01  | 3.56                   | 0.18  |     | RTNA   | 78GAL 01  |
| 26               | 2     |     | TCGS   | 79FAI 01  | 3.56                   | 0.18  |     | RTNA   | 84DEL 01  |
| 26               | 4     |     | ITNA   | 80GER 01  | 3.6                    |       | 34  | FAA    | 83BET 01  |
| 27               | 6     |     | ITNA   | 85GAU 04  | 3.6                    | 0.2   | 11  | AA     | 82LIN 03  |
| 28               | 2     |     | IC     | 83NAD 01  | 3.6                    | 1     | 34  | FAA    | 83BET 01  |
| 36               |       | 34  | WXRF   | 82MIL 01  | 3.7                    | 0.1   | 11  | AA     | 82LIN 03  |
|                  |       |     |        |           | 14                     | 3     |     | ICPES  | 84NAD 01  |
| <u>Co (ng/g)</u> |       |     |        |           | <u>Dy (ng/g)</u>       |       |     |        |           |
| 590              | 60    |     | ITNA   | 80GER 01  | <                      | 600   |     | ITNA   | 86GLA 01  |
| 600              | 150   | 34  | FAA    | 83BET 01  | <                      | 740   | L   | ITNA   | 82SUZ 02  |
| 610              | 180   |     | ITNA   | 84SUZ 02  | <                      | 2000  | L   | WXRF   | 82MIL 01  |
| 620              |       | 34  | FAA    | 83BET 01  | 310                    | 40    |     | ITNA   | 80GER 01  |
| 620              | 60    |     | ITNA   | 82SUZ 02  | 350                    | 40    |     | ITNA   | 84SUZ 02  |
| 630              | 40    |     | ITNA   | 85GAU 04  |                        |       |     |        |           |
| 630              | 50    |     | ITNA   | 86GLA 01  |                        |       |     |        |           |
| 640              |       |     | ITNA   | 84CLE 01  |                        |       |     |        |           |
| 650              | 70    |     | ITNA   | 82HAM 01  |                        |       |     |        |           |
| 700              |       | 34  | WXRF   | 82MIL 01  |                        |       |     |        |           |
| <u>Cr (ug/g)</u> |       |     |        |           | <u>Er (ng/g)</u>       |       |     |        |           |
| 1.9              |       |     | ITNA   | 84CLE 01  | <                      | 2000  | L   | WXRF   | 82MIL 01  |
| 1.9              | 0.2   | 11  | AA     | 82LIN 03  |                        |       |     |        |           |
| 2                |       | 34  | WXRF   | 82MIL 01  |                        |       |     |        |           |
| 2                | 0.3   |     | ITNA   | 82HAM 01  |                        |       |     |        |           |
| 2.3              | 0.2   |     | ITNA   | 80GER 01  |                        |       |     |        |           |
| 2.4              | 0.1   |     | ITNA   | 84SUZ 02  |                        |       |     |        |           |
| 2.48             | 0.08  |     | RTNA   | 78GAL 01  |                        |       |     |        |           |
| 2.5              | 0.2   | 12  | ITNA   | 82SUZ 02  |                        |       |     |        |           |
| <u>Eu (ng/g)</u> |       |     |        |           | <u>F (ug/g)</u>        |       |     |        |           |
|                  |       |     |        |           | 20                     |       |     | ISE    | 83KNA 01  |
|                  |       |     |        |           | 63                     | 4     |     | ISE    | 83BET 02  |
|                  |       |     |        |           | 77                     | 1     |     | IC     | 83NAD 01  |

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Fe (ug/g)</u> |       |     |        |           | <u>Hf (ng/g)</u> |       |     |        |           |
| 1340             | 30    |     | ICPES  | 84NAD 01  | 240              | 40    | 9   | ITNA   | 82SUZ 02  |
| 1900             |       |     | ITNA   | 84CLE 01  | 270              | 40    |     | ITNA   | 80GER 01  |
| 2180             | 170   |     | ITNA   | 84SUZ 02  | 290              | 20    | 9   | ITNA   | 82SUZ 02  |
| 2200             | 100   |     | TCGS   | 79FAI 01  | 290              | 30    |     | ITNA   | 85GAU 04  |
| 2200             | 100   | D   | TCGS   | 80AND 01  | 300              | 30    |     | ITNA   | 84SUZ 02  |
| 2200             | 100   | D   | TCGS   | 80GER 01  | 340              | 40    |     | ITNA   | 86GLA 01  |
| 2200             | 200   |     | ITNA   | 82HAM 01  | <u>Hg (ng/g)</u> |       |     |        |           |
| 2300             |       | 34  | AA     | 83BET 01  |                  |       |     |        |           |
| 2300             | 200   |     | ITNA   | 86GLA 01  |                  |       |     |        |           |
| 2300             | 200   |     | ITNA   | 80GER 01  | <                | 48    |     | ITNA   | 84SUZ 02  |
| 2300             | 600   | 34  | AA     | 83BET 01  | <                | 56    | L   | ITNA   | 82SUZ 02  |
| 2320             | 70    |     | ITNA   | 85GAU 04  | <                | 1500  | L   | WXRF   | 82MIL 01  |
| 2330             | 240   | 12  | ITNA   | 82SUZ 02  | 5                | 15    |     | CVAA   | 82DOO 01  |
| 2340             | 140   | 12  | ITNA   | 82SUZ 02  | 35               | 11    | 12  | ITNA   | 82SUZ 02  |
| 2380             |       |     | ICPES  | 85PEA 01  | <u>Ho (ng/g)</u> |       |     |        |           |
| <u>Ga (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
|                  |       |     |        |           | <                | 1500  | L   | WXRF   | 82MIL 01  |
| <                | 2     | L   | ITNA   | 82SUZ 02  | 49               | 20    |     | ITNA   | 84SUZ 02  |
| <                | 7     |     | ITNA   | 86GLA 01  | <u>I (ng/g)</u>  |       |     |        |           |
| 1.1              |       | 34  | WXRF   | 82MIL 01  |                  |       |     |        |           |
| <u>Gd (ng/g)</u> |       |     |        |           | <                | 750   |     | ITNA   | 84SUZ 02  |
|                  |       |     |        |           | <                | 860   | L   | ITNA   | 82SUZ 02  |
| <                | 1500  | L   | WXRF   | 82MIL 01  | <                | 1300  | L   | WXRF   | 82MIL 01  |
| 230              | 10    |     | TCGS   | 79FAI 01  | 600              | 300   |     | ITNA   | 80GER 01  |
| 350              | 20    |     | TCGS   | 80AND 01  | <u>In (ng/g)</u> |       |     |        |           |
| 440              | 60    |     | ITNA   | 84SUZ 02  |                  |       |     |        |           |
| <u>Ge (ug/g)</u> |       |     |        |           | <                | 31    | L   | ITNA   | 82SUZ 02  |
|                  |       |     |        |           | <                | 1000  | L   | WXRF   | 82MIL 01  |
| 0.5              |       | 34  | WXRF   | 82MIL 01  | 5                | 2     |     | ITNA   | 80GER 01  |
| <u>H (%)</u>     |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| 3.96             | 0.03  | D   | TCGS   | 80AND 01  | 70               |       |     | ICPES  | 84NAD 01  |
| 3.96             | 0.03  | D   | TCGS   | 80GER 01  | 90               | 90    |     | ITNA   | 82SUZ 02  |
| 3.96             | 0.03  |     | TCGS   | 79FAI 01  | 97               | 6     | D   | TCGS   | 80GER 01  |
| 4.18             | 0.14  |     | CB     | 80SCH 02  | 97               | 6     |     | TCGS   | 79FAI 01  |
| <u>H2O- (%)</u>  |       |     |        |           | 97               | 6     | D   | TCGS   | 80AND 01  |
|                  |       |     |        |           | 100              |       | 34  | AA     | 83BET 01  |
| 14               |       |     | FD     | 80KHA 02  | 100              | 20    | 34  | AA     | 83BET 01  |
| 16.8             |       |     | GRAV   | 85LIN 02  | 120              | 10    |     | ITNA   | 80GER 01  |
|                  |       |     |        |           | 199.2            | 39.84 |     | ICPES  | 85PEA 01  |

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>La (ug/g)</u> |       |     |        |           | <u>Mo (ng/g)</u> |       |     |        |           |
| 1.38             | 0.07  |     | ITNA   | 82SUZ 02  | <                | 1000  | L   | WXRF   | 82MIL 01  |
| 1.42             | 0.08  |     | ITNA   | 84SUZ 02  | <                | 5000  |     | ITNA   | 86GLA 01  |
| 1.78             | 0.09  |     | ITNA   | 86GLA 01  | 270              | 100   |     | ITNA   | 82SUZ 02  |
| 1.93             | 0.08  |     | ITNA   | 85GAU 04  |                  |       |     |        |           |
| 2                |       | 34  | WXRF   | 82MIL 01  | <u>N (%)</u>     |       |     |        |           |
| 2                | 0.25  |     | ITNA   | 82HAM 01  | 0.95             | 0.01  |     | IC     | 83NAD 01  |
| 2.1              | 0.3   |     | ITNA   | 80GER 01  | 1                | 0.1   | D   | TCGS   | 80GER 01  |
| <u>Li (ug/g)</u> |       |     |        |           | 1                | 0.1   | D   | TCGS   | 80AND 01  |
| 0.83             | 0.28  |     | ICPES  | 84NAD 01  | 1                | 0.1   |     | TCGS   | 79FAI 01  |
| <u>Lu (ng/g)</u> |       |     |        |           | 1.52             | 0.02  |     | CB     | 80SCH 02  |
| <                | 30    |     | ITNA   | 86GLA 01  | <u>Na (ug/g)</u> |       |     |        |           |
| 15               | 3     |     | ITNA   | 85GAU 04  | 2070             | 30    |     | ICPES  | 84NAD 01  |
| 27               | 4     |     | ITNA   | 80GER 01  | 2200             | 160   |     | ITNA   | 82SCH 05  |
| 33               | 14    |     | ITNA   | 84SUZ 02  | 2279.424         |       |     | ICPES  | 85PEA 01  |
| 36               | 7     |     | ITNA   | 82SUZ 02  | 2300             | 70    |     | ITNA   | 86GLA 01  |
| <u>Mg (ug/g)</u> |       |     |        |           | 2320             |       |     | ITNA   | 84CLE 01  |
| 600              |       |     | ICPES  | 84NAD 01  | 2400             | 70    |     | ITNA   | 82HAM 01  |
| 940              | 190   |     | ITNA   | 82SUZ 02  | 2400             | 200   |     | ITNA   | 80GER 01  |
| 1000             |       | 34  | AA     | 83BET 01  | 2400             | 200   |     | ITNA   | 82SUZ 02  |
| 1000             | 100   | 34  | AA     | 83BET 01  | 2410             | 50    |     | ITNA   | 85GAU 04  |
| 1000             | 200   |     | ITNA   | 80GER 01  | 2420             |       | 34  | WXRF   | 82MIL 01  |
| 1013.04          |       |     | ICPES  | 85PEA 01  | 2700             | 50    | D   | TCGS   | 80AND 01  |
| 1300             | 200   |     | ITNA   | 82HAM 01  | 2700             | 50    | D   | TCGS   | 80GER 01  |
| <u>Mn (ug/g)</u> |       |     |        |           | 2700             | 50    |     | TCGS   | 79FAI 01  |
| 15.7             | 0.8   |     | ICPES  | 84NAD 01  | 2800             |       | 34  | AA     | 83BET 01  |
| 19               |       |     | ITNA   | 84CLE 01  | 3000             | 300   | 34  | AA     | 83BET 01  |
| 19               | 1.2   |     | ITNA   | 82SUZ 02  | <u>Nb (ug/g)</u> |       |     |        |           |
| 20.2             | 0.3   |     | ITNA   | 86GLA 01  | <                | 1     | L   | WXRF   | 82MIL 01  |
| 20.4             | 1.5   |     | ITNA   | 85GAU 04  | <u>Nd (ug/g)</u> |       |     |        |           |
| 20.8             | 2.1   | 34  | FAA    | 83BET 01  | <                | 1     | L   | WXRF   | 82MIL 01  |
| 21.4             |       |     | ESR    | 85SHI 01  | <                | 1.6   | 12  | ITNA   | 82SUZ 02  |
| 21.8             | 2.1   |     | ITNA   | 82HAM 01  | <                | 1.8   | 12  | ITNA   | 82SUZ 02  |
| 22               | 3     |     | ITNA   | 80GER 01  | 1.35             | 0.15  |     | ITNA   | 84SUZ 02  |
| 22.1             |       | 34  | FAA    | 83BET 01  | 1.4              | 0.2   |     | ITNA   | 80GER 01  |
| 22.2             | 0.1   | 11  | AA     | 82LIN 03  | <u>Ni (ug/g)</u> |       |     |        |           |
| 22.3             | 0.8   | 11  | AA     | 82LIN 03  | 1.5              | 0.1   | 11  | AA     | 82LIN 03  |
| 23               |       | 34  | WXRF   | 82MIL 01  | 1.72             | 0.32  | 12  | ITNA   | 82SUZ 02  |
| 24               | 7     | D   | TCGS   | 80GER 01  | 1.78             |       | 34  | FAA    | 83BET 01  |
| 24               | 7     | D   | TCGS   | 80AND 01  | 1.8              | 0.5   | 34  | FAA    | 83BET 01  |
| 24               | 7     |     | TCGS   | 79FAI 01  | 1.83             | 0.23  | 12  | ITNA   | 82SUZ 02  |
| 345.6            |       |     | ICPES  | 85PEA 01  | 2.2              | 0.2   | 11  | AA     | 82LIN 03  |
|                  |       |     |        |           | 3                |       | 34  | WXRF   | 82MIL 01  |

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

| Conc                  | Uncer  | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|-----------------------|--------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>O (%)</u>          |        |     |        |           | <u>S-32/34 (ratio)</u> |       |     |        |           |
| 20.79                 | 0.19   | 34  | 14NAA  | 80KHA 02  | 22.546                 |       |     | IDMS   | 84KEL 01  |
| 33                    | 1.6    |     | 14NAA  | 80NAD 01  |                        |       |     |        |           |
| 34.99                 | 0.32   | 35  | 14NAA  | 80KHA 02  | <u>S-33/34 (ratio)</u> |       |     |        |           |
| <u>P (ug/g)</u>       |        |     |        |           | 0.1778                 |       |     | IDMS   | 84KEL 01  |
| 60                    | 9      |     | ICPES  | 84NAD 01  | <u>Sb (ng/g)</u>       |       |     |        |           |
| 63                    |        | 34  | WXRF   | 82MIL 01  | < 200                  |       |     | ITNA   | 86GLA 01  |
| 251                   | 21     |     | ICPES  | 85PEA 01  | < 1000                 |       | L   | WXRF   | 82MIL 01  |
| <u>Pb (ug/g)</u>      |        |     |        |           | 120                    | 10    |     | RTNA   | 78GAL 01  |
| 1.48                  | 0.21   |     | HAA    | 82NAD 01  | 130                    |       |     | ITNA   | 84CLE 01  |
| 1.8                   | 0.1    | 11  | AA     | 82LIN 03  | 130                    | 10    |     | HAA    | 82NAD 01  |
| 1.9                   | 0.3    | 11  | AA     | 82LIN 03  | 140                    | 10    |     | ITNA   | 80GER 01  |
| 1.9                   | 0.6    | 34  | FAA    | 83BET 01  | 140                    | 10    |     | ITNA   | 82HAM 01  |
| 2                     |        | 34  | FAA    | 83BET 01  | 147                    | 21    |     | ITNA   | 85GAU 04  |
| 2.6                   |        | 34  | WXRF   | 82MIL 01  | 160                    | 30    |     | ITNA   | 82SUZ 02  |
| <u>Pb-210 (pCi/g)</u> |        |     |        |           | 170                    | 40    | 5   | ITNA   | 80TOU 01  |
| 0.0699                | 0.0013 |     | NM     | 80CAS 01  | 200                    |       | 11  | HAA    | 82CRO 03  |
| 0.07                  | 0.001  | D   | NM     | 81CAS 01  | 200                    |       | 11  | HAA    | 82CRO 03  |
| <u>Pr (ug/g)</u>      |        |     |        |           | <u>Sc (ng/g)</u>       |       |     |        |           |
| <                     | 1      | L   | WXRF   | 82MIL 01  | < 1200                 |       | L   | ITNA   | 80TOU 01  |
| <                     | 4.3    | 12  | ITNA   | 82SUZ 02  | 560                    | 50    |     | ITNA   | 82SUZ 02  |
| <                     | 4.4    | 12  | ITNA   | 82SUZ 02  | 610                    | 14    |     | ITNA   | 85GAU 04  |
| <u>Rb (ug/g)</u>      |        |     |        |           | 610                    | 20    |     | ITNA   | 82HAM 01  |
| <                     | 0.3    | L   | WXRF   | 82MIL 01  | 610                    | 40    |     | ITNA   | 86GLA 01  |
| 0.76                  | 0.09   | 12  | ITNA   | 82SUZ 02  | 690                    | 70    |     | ITNA   | 80GER 01  |
| 0.83                  | 0.08   | 12  | ITNA   | 82SUZ 02  | 700                    | 30    | 5   | ITNA   | 80TOU 01  |
| 0.95                  | 0.37   |     | ITNA   | 85GAU 04  | 900                    |       | 34  | WXRF   | 82MIL 01  |
| <u>S (ug/g)</u>       |        |     |        |           | <u>Se (ug/g)</u>       |       |     |        |           |
| 2880                  | 40     |     | ICPES  | 85PEA 01  | 0.79                   | 0.07  |     | HAA    | 82NAD 01  |
| 3200                  | 100    | D   | TCGS   | 80AND 01  | 0.8                    | 0.2   |     | RTNA   | 80KNA 01  |
| 3200                  | 100    | D   | TCGS   | 80GER 01  | 0.82                   | 0.04  |     | RTNA   | 78GAL 01  |
| 3200                  | 100    |     | TCGS   | 79FAI 01  | 0.9                    |       |     | AF     | 82WIL 01  |
| 3280                  | 90     |     | CB     | 85GLA 03  | 0.9                    |       |     | FAA    | 82WIL 01  |
| 3300                  | 100    |     | IC     | 83NAD 01  | 0.93                   | 0.07  | 7   | HAA    | 84IMA 01  |
| 3470                  | 60     |     | CB     | 86GAU 01  | 0.93                   | 0.07  | D   | HAA    | 84IMA 03  |
| 3540                  | 40     |     | XRF    | 84WEB 01  | 0.94                   | 0.11  | 9   | ITNA   | 82SUZ 02  |
| 3540                  | 140    |     | IDMS   | 84KEL 01  | 0.97                   | 0.03  |     | ITNA   | 84SUZ 02  |
| 3640                  | 50     |     | CB     | 84GLA 11  | 0.98                   | 0.09  |     | ITNA   | 80GER 01  |
|                       |        |     |        |           | 0.99                   | 0.11  | 9   | ITNA   | 82SUZ 02  |
|                       |        |     |        |           | 1.0                    |       |     | ITNA   | 84CLE 01  |
|                       |        |     |        |           | 1.0                    | 0.1   |     | HAA    | 85LIN 01  |
|                       |        |     |        |           | 1.0                    | 0.1   |     | HAA    | 85LIN 02  |
|                       |        |     |        |           | 1.1                    | 0.1   |     | RTNA   | 84DEL 01  |
|                       |        |     |        |           | 1.2                    |       | 34  | WXRF   | 82MIL 01  |

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Si (ug/g)</u> |       |     |        |           | <u>Te (ng/g)</u>      |       |     |        |           |
| 5200             | 200   |     | TCGS   | 79FAI 01  | <                     | 290   | L   | ITNA   | 82SUZ 02  |
| 5200             | 200   | D   | TCGS   | 80AND 01  | <                     | 360   |     | ITNA   | 84SUZ 02  |
| 5200             | 200   | D   | TCGS   | 80GER 01  | <                     | 600   | 34  | WXRF   | 82MIL 01  |
| 5600             | 700   |     | 14NAA  | 80GER 01  | <u>Th (ng/g)</u>      |       |     |        |           |
| 6000             | 1000  | 34  | AA     | 83BET 01  | 560                   | 30    |     | ITNA   | 84SUZ 02  |
| 6200             |       | 34  | AA     | 83BET 01  | 580                   | 40    | 12  | ITNA   | 82SUZ 02  |
| 6500             | 600   |     | ICPES  | 84NAD 01  | 610                   | 70    | 12  | ITNA   | 82SUZ 02  |
| 7600             | 22    |     | ICPES  | 85PEA 01  | 630                   | 25    |     | ITNA   | 85GAU 04  |
| <u>Sm (ng/g)</u> |       |     |        |           | 630                   | 60    |     | ITNA   | 86GLA 01  |
| 250              | 10    | D   | TCGS   | 80GER 01  | 640                   | 50    | 5   | ITNA   | 80TOU 01  |
| 250              | 10    | D   | TCGS   | 80AND 01  | 640                   | 60    |     | ITNA   | 80GER 01  |
| 250              | 10    |     | TCGS   | 79FAI 01  | <u>Th-228 (fCi/g)</u> |       |     |        |           |
| 260              | 10    |     | ITNA   | 85GAU 04  | 64.8                  | 4.1   |     | NM     | 80CAS 01  |
| 260              | 20    |     | ITNA   | 82HAM 01  | 64.8                  | 4.1   | D   | NM     | 81CAS 01  |
| 270              | 10    | 5   | ITNA   | 80TOU 01  | <u>Th-23 (fCi/g)</u>  |       |     |        |           |
| 300              | 40    |     | ITNA   | 80GER 01  | 76.5                  | 7.9   |     | NM     | 80CAS 01  |
| 330              | 60    |     | ITNA   | 84SUZ 02  | 76.5                  | 7.9   | D   | NM     | 81CAS 01  |
| 340              | 30    |     | ITNA   | 82SUZ 02  | <u>Th-232 (fCi/g)</u> |       |     |        |           |
| <u>Sn (ug/g)</u> |       |     |        |           | 61.9                  | 7.7   | D   | NM     | 81CAS 01  |
| <                | 0.6   | L   | WXRF   | 82MIL 01  | 61.9                  | 7.7   |     | NM     | 80CAS 01  |
| <u>Sr (ug/g)</u> |       |     |        |           | <u>Ti (ug/g)</u>      |       |     |        |           |
| 90               | 1     |     | ICPES  | 84NAD 01  | 124                   | 2     |     | ICPES  | 84NAD 01  |
| 118              | 8     | 12  | ITNA   | 82SUZ 02  | 190                   | 20    | D   | TCGS   | 80GER 01  |
| 127              | 24    | 12  | ITNA   | 82SUZ 02  | 190                   | 20    | D   | TCGS   | 80AND 01  |
| 129              | 14    |     | ITNA   | 80GER 01  | 190                   | 20    |     | TCGS   | 79FAI 01  |
| 140              |       | 34  | WXRF   | 82MIL 01  | 200                   |       | 34  | COLOR  | 83BET 01  |
| <u>Ta (ng/g)</u> |       |     |        |           | 200                   |       | 34  | WXRF   | 82MIL 01  |
| <                | 300   |     | ITNA   | 86GLA 01  | 200                   | 20    | 34  | COLOR  | 83BET 01  |
| <                | 1000  | L   | WXRF   | 82MIL 01  | 200                   | 40    |     | ITNA   | 82HAM 01  |
| 44               | 6     |     | ITNA   | 82SUZ 02  | 201                   |       |     | ICPES  | 85PEA 01  |
| 45               | 9     |     | ITNA   | 84SUZ 02  | 207                   |       |     | WXRF   | 83GAR 01  |
| 46               | 9     |     | ITNA   | 80GER 01  | 210                   | 20    |     | ITNA   | 80GER 01  |
| 48               | 9     |     | ITNA   | 85GAU 04  | 210                   | 50    |     | ITNA   | 82SUZ 02  |
| <u>Tb (ng/g)</u> |       |     |        |           | <u>Tl (ug/g)</u>      |       |     |        |           |
| <                | 100   |     | ITNA   | 86GLA 01  | <                     | 1     | L   | WXRF   | 82MIL 01  |
| <                | 2000  | L   | WXRF   | 82MIL 01  | <u>Tm (ng/g)</u>      |       |     |        |           |
| 35               | 3     |     | ITNA   | 82SUZ 02  | <                     | 1000  | L   | WXRF   | 82MIL 01  |
| 50               | 4     |     | ITNA   | 84SUZ 02  | 63                    | 10    |     | ITNA   | 84SUZ 02  |

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

| Conc                 | Uncer  | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|----------------------|--------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>U (ng/g)</u>      |        |     |        |           | <u>Yb (ng/g)</u> |       |     |        |           |
| 200                  | 50     |     | ITNA   | 80GER 01  | 140              | 20    |     | ITNA   | 80GER 01  |
| 220                  | 20     |     | ITNA   | 84SUZ 02  | 159              | 3     |     | ITNA   | 85GAU 04  |
| 240                  | 30     |     | ITNA   | 82SUZ 02  | 170              | 60    | 5   | ITNA   | 80TOU 01  |
| 250                  | 10     |     | DNA    | 86GLA 01  | 175              | 12    |     | ITNA   | 82SUZ 02  |
| 320                  | 40     | 5   | ITNA   | 80TOU 01  | 179              | 16    |     | ITNA   | 84SUZ 02  |
| <u>U-234 (fCi/g)</u> |        |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 71.9                 | 4.4    |     | NM     | 80CAS 01  | 4.2              | 1     | 34  | FAA    | 83BET 01  |
| 71.9                 | 4.4    | D   | NM     | 81CAS 01  | 4.9              |       | 34  | FAA    | 83BET 01  |
| <u>U-235 (fCi/g)</u> |        |     |        |           | 5                | 0.1   | 11  | AA     | 82LIN 03  |
| 4.9                  | 0.3    | D   | NM     | 81CAS 01  | 5                | 0.4   | 11  | AA     | 82LIN 03  |
| 4.9                  | 0.3    |     | NM     | 80CAS 01  | 5.4              | 0.76  |     | ITNA   | 82HAM 01  |
| <u>U-238 (pCi/g)</u> |        |     |        |           | 5.6              |       | 34  | WXRF   | 82MIL 01  |
| 0.0731               | 0.0046 |     | NM     | 80CAS 01  | 6.6              | 1.4   | 12  | ITNA   | 82SUZ 02  |
| 0.0731               | 0.0046 | D   | NM     | 81CAS 01  | 7.5              | 2.2   |     | ITNA   | 80GER 01  |
| <u>V (ug/g)</u>      |        |     |        |           | 7.8              | 1.2   | 12  | ITNA   | 82SUZ 02  |
|                      |        |     |        |           | 18               | 3     |     | ICPES  | 84NAD 01  |
|                      |        |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
|                      |        |     |        |           | <                | 60    |     | ITNA   | 86GLA 01  |
|                      |        |     |        |           | 15               |       | 34  | WXRF   | 82MIL 01  |
|                      |        |     |        |           | 15.7             | 4.3   | 12  | ITNA   | 82SUZ 02  |
|                      |        |     |        |           | 16               | 3     |     | ITNA   | 80GER 01  |
|                      |        |     |        |           | 19.4             | 3.3   | 12  | ITNA   | 82SUZ 02  |
| <u>W (ng/g)</u>      |        |     |        |           | <u>Y (ug/g)</u>  |       |     |        |           |
| <                    | 900    |     | ITNA   | 86GLA 01  | 1.9              |       | 34  | WXRF   | 82MIL 01  |
| <                    | 1000   | L   | WXRF   | 82MIL 01  |                  |       |     |        |           |
| 173                  | 51     |     | ITNA   | 82SUZ 02  |                  |       |     |        |           |
| 210                  | 50     |     | ITNA   | 84SUZ 02  |                  |       |     |        |           |

TABLE 1641-1: COMPILED DATA FOR NBS SRM 1641 MERCURY IN WATER  
(revised 3/1/86)

| ELE | UNITS | NBS  |        | CONSENSUS | METHOD |
|-----|-------|------|--------|-----------|--------|
|     |       | Mean | SD     | Mean (n)  |        |
| Hg  | ug/mL | 1.49 | ± 0.05 | 1.47 (1)  | AA     |

TABLE 1641-2: INDIVIDUAL DATA FOR NBS SRM 1641 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|
| <u>Hg (mg/L)</u> |       |     |        |           |
| 1.47             | 0.17  |     | CVAA   | 82GLA 02  |

TABLE 1641A-1: COMPILED DATA FOR NBS SRM 1641A MERCURY IN WATER  
(revised 3/1/86)

| ELE | UNITS | NBS  |        |
|-----|-------|------|--------|
|     |       | Mean | SD     |
| Hg  | ug/mL | 1.1  | ± 0.05 |

TABLE 1641B-1: COMPILED DATA FOR NBS SRM 1641B MERCURY IN WATER  
(revised 3/1/86)

| ELE | UNITS | NBS  |        | CONSENSUS | METHOD |
|-----|-------|------|--------|-----------|--------|
|     |       | Mean | SD     | Mean (n)  |        |
| Hg  | ug/mL | 1.52 | ± 0.04 | 1.52 (1)  | NAA    |

TABLE 1641B-2: INDIVIDUAL DATA FOR NBS SRM 1641B (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|
| <u>Hg (ug/g)</u> |       |     |        |           |
| 1.52             | 0.05  |     | RTNA   | 85FEN 01  |

TABLE 1642-1: COMPILED DATA FOR NBS SRM 1642 MERCURY IN WATER  
(revised 3/1/86)

| ELE | UNITS | NBS    |      |
|-----|-------|--------|------|
|     |       | Mean ± | SD   |
| Hg  | ng/mL | 1.18 ± | 0.05 |

TABLE 1642A-1: COMPILED DATA FOR NBS SRM 1642A MERCURY IN WATER  
(revised 3/1/86)

| ELE | UNITS | NBS    |      | CONSENSUS |          | MEDIAN | RANGE       | METHOD |
|-----|-------|--------|------|-----------|----------|--------|-------------|--------|
|     |       | Mean ± | SD   | Mean ±    | SD (n)   |        |             |        |
| Hg  | ng/mL | 1.1 ±  | 0.06 | 1.22 ±    | 0.07 (4) | 1.19   | 1.14 - 1.30 | AA     |

TABLE 1642A-2: INDIVIDUAL DATA FOR NBS SRM 1642A (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|
| <u>Hg (ug/L)</u> |       |     |        |           |
| 1.14             | 0.05  |     | CVAA   | 85GAU 04  |
| 1.19             | 0.02  |     | CVAA   | 81KAH 01  |
| 1.24             |       |     | CVAA   | 84GLA 11  |
| 1.30             |       |     | CVAA   | 82GLA 02  |

TABLE 1642B-1: COMPILED DATA FOR NBS SRM 1642B MERCURY IN WATER  
(revised 3/1/86)

| ELE | UNITS | NBS    |      | CONSENSUS |     | RANGE       | METHOD |
|-----|-------|--------|------|-----------|-----|-------------|--------|
|     |       | Mean ± | SD   | Mean      | (n) |             |        |
| Hg  | ng/mL | 1.49 ± | 0.06 | 1.46      | (2) | 1.45 - 1.48 | AA     |

TABLE 1642B-2: INDIVIDUAL DATA FOR NBS SRM 1642B (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|
| <u>Hg (ug/L)</u> |       |     |        |           |
| 1.45             | 0.13  |     | CVAA   | 86GAU 01  |
| 1.48             | 0.06  |     | CVAA   | 85GAU 04  |

TABLE 1643-1: COMPILED DATA FOR NBS SRM 1643 TRACE ELEMENTS IN WATER (revised 3/1/86)

| ELE | UNITS | NBS     |    | CONSENSUS  |      | MEDIAN | RANGE       | AA         |     | ICPES |     | OTHER METHODS |      |       |        |     |       |
|-----|-------|---------|----|------------|------|--------|-------------|------------|-----|-------|-----|---------------|------|-------|--------|-----|-------|
|     |       | Mean    | SD | Mean       | SD   |        |             | Mean       | SD  | Mean  | (n) | Method        | Mean | (n)   | Method |     |       |
| Al  | ng/g  | 77 ± 1  |    | 78 ± 6     | (6)  | 77.1   | 69 - 83     | 79 ± 7     | (3) | 69    | (1) | 77.1          | (1)  | AE-AF | 83     | (1) | DCPES |
| As  | ng/g  | 76 ± 1  |    | 75 ± 3     | (5)  | 75.7   | 71 - 79     | 75.7       | (1) | 72    | (2) | 78.5          | (2)  | ASV   | ---    | --- | ---   |
| Au  | ng/g  | 10      |    | ---        |      | ---    | ---         | ---        |     | ---   |     | ---           |      |       | ---    | --- | ---   |
| Ba  | ng/g  | 18      |    | 18.9 ± 1.5 | (6)  | 18     | 17.3 - 21.5 | 19.0 ± 1.7 | (4) | ---   |     | 18.5          | (2)  | AE-AF | ---    | --- | ---   |
| Be  | ng/g  | 19 ± 1  |    | 20         | (2)  | ---    | 18.8 - 21.3 | 18.8       | (1) | ---   |     | 21.3          | (1)  | AE-AF | ---    | --- | ---   |
| Ca  | ug/g  | 27      |    | 23.9       | (1)  | ---    | ---         | ---        |     | ---   |     | 23.9          | (1)  | NAA   | ---    | --- | ---   |
| Cd  | ng/g  | 8 ± 1   |    | 9.5 ± 2.4  | (5)  | 9      | 7.1 - 12    | 8.9 ± 2.7  | (3) | ---   |     | 9             | (1)  | XRF   | 12     | (1) | FE    |
| Co  | ng/g  | 17 ± 1  |    | 20 ± 2     | (8)  | 20     | 16 - 23     | 18.4 ± 1.7 | (5) | 22    | (1) | 21.5          | (2)  | XRF   | ---    | --- | ---   |
| Cr  | ng/g  | 15 ± 1  |    | 17.3 ± 1.8 | (6)  | 16     | 16 - 20     | 17.6 ± 1.8 | (5) | 16    | (1) | ---           | ---  | ---   | ---    | --- | ---   |
| Cu  | ng/g  | 16 ± 1  |    | 15.7 ± 0.9 | (9)  | 16     | 14 - 17     | 15.3 ± 0.8 | (6) | 19    | (1) | 16.5          | (2)  | XRF   | 16.2   | (1) | AE-AF |
| Fe  | ng/g  | 75 ± 1  |    | 78 ± 3     | (10) | 78     | 72 - 82     | 76 ± 3     | (5) | 81    | (1) | 82            | (2)  | XRF   | 76     | (1) | DCPES |
| Fe  | ng/g  | ---     |    | ---        |      | ---    | ---         | ---        |     | ---   |     | 78            | (1)  | FAF   | ---    | --- | ---   |
| Hg  | ng/g  | 2       |    | < 8        |      | ---    | ---         | ---        |     | ---   |     | < 8           |      | XRF   | ---    | --- | ---   |
| K   | ug/g  | 2       |    | ---        |      | ---    | ---         | ---        |     | ---   |     | ---           |      |       | ---    | --- | ---   |
| Mg  | ug/g  | 7       |    | 5.7        | (1)  | ---    | ---         | ---        |     | ---   |     | 5.7           | (1)  | NAA   | ---    | --- | ---   |
| Mn  | ng/g  | 29 ± 1  |    | 31 ± 4     | (15) | 29     | 25 - 39     | 29 ± 3     | (8) | 30    | (1) | 26            | (1)  | XRF   | 20     | (1) | NAA   |
| Mn  | ng/g  | ---     |    | ---        |      | ---    | ---         | ---        |     | ---   |     | 35.5          | (2)  | FE    | ---    | --- | ---   |
| Mn  | ng/g  | ---     |    | ---        |      | ---    | ---         | ---        |     | ---   |     | 29            | (1)  | DCPES | 28     | (1) | AE-AF |
| Mo  | ng/g  | 105 ± 3 |    | 105 ± 8    | (8)  | 104    | 93 - 118    | 106 ± 8    | (6) | 93    | (1) | 110           | (1)  | AE-AF | ---    | --- | ---   |
| Na  | ug/g  | 10      |    | 8.8        | (1)  | ---    | ---         | ---        |     | ---   |     | 8.8           | (1)  | NAA   | ---    | --- | ---   |
| Ni  | ng/g  | 49 ± 1  |    | 49 ± 2     | (12) | 50     | 44 - 52     | 48 ± 3     | (7) | 48    | (1) | 53            | (2)  | XRF   | 48     | (1) | DCPES |
| Ni  | ng/g  | ---     |    | ---        |      | ---    | ---         | ---        |     | ---   |     | 51.3          | (1)  | AE-AF | 50     | (1) | FE    |
| Pb  | ng/g  | 20 ± 1  |    | 22 ± 4     | (4)  | 21     | 18 - 27     | 19.5       | (2) | ---   |     | 25            | (2)  | XRF   | ---    | --- | ---   |
| Se  | ng/g  | 12 ± 1  |    | 11.2 ± 1.0 | (3)  | 11.6   | 10 - 12     | 12         | (1) | 10    | (2) | ---           | ---  | ---   | ---    | --- | ---   |
| Sn  | ng/g  | ---     |    | < 20       |      | ---    | ---         | ---        |     | ---   |     | < 20          |      | XRF   | ---    | --- | ---   |
| Sr  | ng/g  | 212 ± 4 |    | 203        | (1)  | ---    | ---         | ---        |     | 203   | (1) | ---           | ---  | ---   | ---    | --- | ---   |
| V   | ng/g  | 50 ± 1  |    | 48 ± 6     | (7)  | 50     | 40 - 55     | 50 ± 5     | (5) | ---   |     | 40            | (1)  | NAA   | 50     | (1) | DCPES |
| Zn  | ng/g  | 65 ± 3  |    | 62 ± 4     | (9)  | 62     | 55 - 69     | 62 ± 5     | (5) | 67    | (1) | 62            | (2)  | XRF   | 61     | (1) | DCPES |

TABLE 1643-2: INDIVIDUAL DATA FOR NBS SRM 1643 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Al (ng/g)</u> |       |     |        |           | <u>Co (ng/g)</u> |       |     |        |           |
| 50               |       |     | ITNA   | 81HAB 01  | 16               | 3     | 14  | FAA    | 84HAR 01  |
| 69               | 3     |     | ICPES  | 85FLO 01  | 18               | 3     | 14  | FAA    | 84HAR 01  |
| 71               | 8     |     | FAA    | 84HAR 02  | 18               | 6     | 14  | FAA    | 84HAR 01  |
| 77.1             | 5.7   |     | AE-AF  | 78EPS 01  | 20               | 2     |     | XRF    | 80BER 02  |
| 82.1             | 1.4   |     | FAA    | 78EPS 01  | 20               | 5     |     | FAA    | 84HAR 02  |
| 83               |       |     | FAA    | 84SLA 02  | 20               | 5     | 14  | FAA    | 84HAR 01  |
| 83               | 2     | D   | DCPES  | 81REE 01  | 22               | 2     |     | ICPES  | 85FLO 01  |
| 83               | 2     |     | DCPES  | 79REE 01  | 23               | 2     |     | EXRF   | 84KNA 01  |
| <u>As (ng/g)</u> |       |     |        |           | <u>Cr (ng/g)</u> |       |     |        |           |
| 71               |       |     | ICPES  | 82NYG 01  | 16               | 1     |     | ICPES  | 85FLO 01  |
| 73               | 1     |     | ICPES  | 83PRU 01  | 16               | 2     | 14  | FAA    | 84HAR 01  |
| 75.7             | 1.3   |     | HAA    | 80YAN 01  | 16               | 2     | 14  | FAA    | 84HAR 01  |
| 78               |       | 13  | ASV    | 82LEU 01  | 17               | 2     | 14  | FAA    | 84HAR 01  |
| 79               |       | 13  | ASV    | 82LEU 01  | 19               | 5     | 14  | FAA    | 84HAR 01  |
|                  |       |     |        |           | 20               | 5     |     | FAA    | 84HAR 02  |
| <u>Ba (ng/g)</u> |       |     |        |           | <u>Cu (ng/g)</u> |       |     |        |           |
| 17.3             | 1.8   |     | AE-AF  | 79EPS 03  | 14               | 0.3   |     | FAA    | 78EPS 01  |
| 18               |       | 14  | FAA    | 79EPS 03  | 15               | 1     |     | FAA    | 84HAR 02  |
| 18               |       |     | FAA    | 78BEA 01  | 15               | 2     | 14  | FAA    | 84HAR 01  |
| 18.7             | 0.7   |     | FAA    | 78EPS 01  | 16               | 2     | 14  | FAA    | 84HAR 01  |
| 19.7             | 1     |     | AE-AF  | 78EPS 01  | 16               | 2     | 14  | FAA    | 84HAR 01  |
| 21.5             | 1.2   | 14  | FAA    | 79EPS 03  | 16               | 2     | 14  | FAA    | 84HAR 01  |
| 42               | 1     |     | ICPES  | 85FLO 01  | 16               | 2     | 14  | FAA    | 84HAR 01  |
|                  |       |     |        |           | 16               | 3     |     | EXRF   | 84KNA 01  |
|                  |       |     |        |           | 16.2             | 1.8   |     | AE-AF  | 78EPS 01  |
|                  |       |     |        |           | 17               | 1     |     | XRF    | 80BER 02  |
|                  |       |     |        |           | 19               | 1     |     | ICPES  | 85FLO 01  |
| <u>Be (ng/g)</u> |       |     |        |           | <u>Fe (ng/g)</u> |       |     |        |           |
| 18.8             | 0.4   |     | FAA    | 78EPS 01  | 72               | 3     | 14  | FAA    | 84HAR 01  |
| 21.3             | 5.5   |     | AE-AF  | 78EPS 01  | 74               | 3     | 14  | FAA    | 84HAR 01  |
| <u>Ca (ug/g)</u> |       |     |        |           | <u>Hg (ng/g)</u> |       |     |        |           |
| 23.9             |       |     | ITNA   | 81HAB 01  | 76               | 2     | D   | DCPES  | 81REE 01  |
|                  |       |     |        |           | 76               | 2     |     | DCPES  | 79REE 01  |
|                  |       |     |        |           | 77               | 7     |     | FAA    | 84HAR 02  |
|                  |       | 13  | FAA    | 84SLA 02  | 78               |       |     | FAF    | 80EPS 04  |
|                  |       | 13  | FAA    | 84SLA 02  | 78               | 3     | 14  | FAA    | 84HAR 01  |
|                  | 1     |     | EXRF   | 84KNA 01  | 78               | 5     | 14  | FAA    | 84HAR 01  |
| 12               | 2     |     | FE     | 82JEN 05  | 81               | 6     |     | ICPES  | 85FLO 01  |
| 12               | 2     |     | FAA    | 82JEN 05  | 82               | 3     |     | XRF    | 80BER 02  |
|                  |       |     |        |           | 82               | 5     |     | EXRF   | 84KNA 01  |
|                  |       |     |        |           | <                | 8     | L   | XRF    | 80BER 02  |

TABLE 1643-2: INDIVIDUAL DATA FOR NBS SRM 1643 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mg (ug/g)</u> |       |     |        |           | <u>Pb (ng/g)</u> |       |     |        |           |
| 5.7              |       |     | ITNA   | 81HAB 01  | 18               |       |     | FAA    | 84SLA 02  |
|                  |       |     |        |           | 21               | 7     |     | FAA    | 84HAR 02  |
| <u>Mn (ng/g)</u> |       |     |        |           | 23               | 2     |     | XRF    | 80BER 02  |
| 20               |       |     | ITNA   | 81HAB 01  | 27               | 9     |     | EXRF   | 84KNA 01  |
| 25               |       |     | FAA    | 84SLA 02  | <u>Se (ng/g)</u> |       |     |        |           |
| 26               | 3     |     | XRF    | 80BER 02  | 10               |       |     | ICPES  | 82NYG 01  |
| 27.5             | 0.7   |     | FAA    | 78EPS 01  | 11.6             | 0.3   |     | ICPES  | 83PRU 01  |
| 28               | 2     | 14  | FAA    | 84HAR 01  | 12               | 1     |     | HAA    | 81COX 01  |
| 28               | 2.5   |     | AE-AF  | 78EPS 01  | <u>Sn (ng/g)</u> |       |     |        |           |
| 29               | 3     |     | DCPES  | 79REE 01  |                  |       |     |        |           |
| 29               | 3     | D   | DCPES  | 81REE 01  | <                | 20    | L   | XRF    | 80BER 02  |
| 29               | 7     | 14  | FAA    | 84HAR 01  | <u>Sr (ng/g)</u> |       |     |        |           |
| 30               | 1     |     | ICPES  | 85FLO 01  | 203              | 16    |     | ICPES  | 85FLO 01  |
| 30               | 5     | 14  | FAA    | 84HAR 01  | <u>V (ng/g)</u>  |       |     |        |           |
| 31               | 2     |     | FAA    | 84HAR 02  | 40               |       |     | ITNA   | 81HAB 01  |
| 31               | 2     | 14  | FAA    | 84HAR 01  | 41               | 15    |     | FAA    | 84HAR 02  |
| 34               | 1     |     | FAA    | 82JEN 05  | 50               | 2     | D   | DCPES  | 81REE 01  |
| 35               | 1     |     | FE     | 82JEN 05  | 50               | 2     |     | DCPES  | 79REE 01  |
| 36               | 1     |     | FE     | 82JEN 05  | 50               | 7     | 14  | FAA    | 84HAR 01  |
| 39               | 1     |     | FAA    | 82JEN 05  | 51               | 7     | 14  | FAA    | 84HAR 01  |
| <u>Mo (ng/g)</u> |       |     |        |           | 52               | 7     | 14  | FAA    | 84HAR 01  |
| 93               | 4     |     | ICPES  | 85FLO 01  | 55               | 6     | 14  | FAA    | 84HAR 01  |
| 95               | 17    | 14  | FAA    | 84HAR 01  | <u>Zn (ng/g)</u> |       |     |        |           |
| 102              | 18    | 14  | FAA    | 84HAR 01  | 55               | 7     | 14  | FAA    | 84HAR 01  |
| 104              | 3     |     | FAA    | 78EPS 01  | 61               | 1     | D   | DCPES  | 81REE 01  |
| 105              | 27    |     | FAA    | 84HAR 02  | 61               | 1     |     | DCPES  | 79REE 01  |
| 110              | 5     |     | AE-AF  | 78EPS 01  | 61               | 12    | 14  | FAA    | 84HAR 01  |
| 113              | 18    | 14  | FAA    | 84HAR 01  | 61               | 17    |     | EXRF   | 84KNA 01  |
| 118              | 25    | 14  | FAA    | 84HAR 01  | 62               | 5     | 14  | FAA    | 84HAR 01  |
| <u>Na (ug/g)</u> |       |     |        |           | 62               | 7     | 14  | FAA    | 84HAR 01  |
| 8.8              |       |     | ITNA   | 81HAB 01  | 63               | 3     |     | XRF    | 80BER 02  |
| <u>Ni (ng/g)</u> |       |     |        |           | 67               | 3     |     | ICPES  | 85FLO 01  |
| 44               | 5     | 14  | FAA    | 84HAR 01  | 69               | 12    |     | FAA    | 84HAR 02  |
| 45               | 4     |     | FAA    | 82JEN 05  | <u>Zn (ng/g)</u> |       |     |        |           |
| 48               | 3     |     | ICPES  | 85FLO 01  | 55               | 7     | 14  | FAA    | 84HAR 01  |
| 48               | 4     | D   | DCPES  | 81REE 01  | 61               | 1     | D   | DCPES  | 81REE 01  |
| 48               | 4     |     | DCPES  | 79REE 01  | 61               | 1     |     | DCPES  | 79REE 01  |
| 48               | 14    |     | FAA    | 84HAR 02  | 61               | 12    | 14  | FAA    | 84HAR 01  |
| 49.8             | 0.8   |     | FAA    | 78EPS 01  | 61               | 17    |     | EXRF   | 84KNA 01  |
| 50               | 3     |     | FE     | 82JEN 05  | 62               | 5     | 14  | FAA    | 84HAR 01  |
| 50               | 3     |     | XRF    | 80BER 02  | 62               | 7     | 14  | FAA    | 84HAR 01  |
| 50               | 5     | 14  | FAA    | 84HAR 01  | 63               | 3     |     | XRF    | 80BER 02  |
| 51               | 3     | 14  | FAA    | 84HAR 01  | 67               | 3     |     | ICPES  | 85FLO 01  |
| 51.3             | 4.2   |     | AE-AF  | 78EPS 01  | 69               | 12    |     | FAA    | 84HAR 02  |
| 52               | 6     | 14  | FAA    | 84HAR 01  | <u>Zn (ng/g)</u> |       |     |        |           |
| 56               | 2     |     | EXRF   | 84KNA 01  | 55               | 7     | 14  | FAA    | 84HAR 01  |

TABLE 1643A-1: COMPILED DATA FOR NBS SRM 1643A TRACE ELEMENTS IN WATER (revised 3/1/86)

| ELEMENT UNITS | NBS       |      | CONSENSUS   |      | MEDIAN | RANGE     | AA          |      | ICPES      |     | OTHER METHODS |           |       |                  |
|---------------|-----------|------|-------------|------|--------|-----------|-------------|------|------------|-----|---------------|-----------|-------|------------------|
|               | Mean ± SD | (n)  | Mean ± SD   | (n)  |        |           | Mean ± SD   | (n)  | Mean ± SD  | (n) | Method        | Mean ± SD | (n)   |                  |
| Ag            | 2.8 ± 0.3 | (9)  | 3.3 ± 0.4   | (9)  | 3.5    | 2.7 - 3.9 | 3.1 ± 0.5   | (5)  | 3.4        | (1) | 3.6 ± 0.2     | (3)       | ICPMS | ---              |
| Al            | ---       | (2)  | 125         | (2)  | ---    | 121 - 129 | ---         | (6)  | ---        | (1) | 129           | (1)       | NAA   | ---              |
| As            | 76 ± 7    | (11) | 75 ± 3      | (11) | 75.1   | 70 - 80   | 75 ± 4      | (6)  | 74.5       | (2) | 74            | (1)       | ICPMS | 78 (2) NAA       |
| Au            | 15        | (1)  | 15          | (1)  | ---    | ---       | ---         | (4)  | 15         | (1) | ---           | (3)       | ICPMS | ---              |
| Ba            | 46 ± 2    | (8)  | 47 ± 4      | (8)  | 45.7   | 41 - 54   | 47 ± 2      | (4)  | 46         | (1) | 47 ± 6        | (3)       | ICPMS | ---              |
| Be            | 19 ± 2    | (5)  | 20 ± 2      | (5)  | 19     | 18.6 - 24 | ---         | (4)  | 18.9 ± 0.2 | (4) | 24            | (1)       | ICPMS | ---              |
| Ca            | 27        | (7)  | 27.3 ± 0.5  | (7)  | 27.4   | 26.5 - 28 | 28.0 ± 1.4  | (4)  | 27.3 ± 0.7 | (4) | ---           | (3)       | ICPMS | ---              |
| Cd            | 10 ± 1    | (22) | 10.7 ± 1.2  | (22) | 10.6   | 8.4 - 13  | 11.0 ± 1.5  | (8)  | 10.8 ± 1.0 | (6) | 9.8 ± 0.4     | (3)       | NAA   | 10.1 (1) FAAC    |
| Cd            | ---       | (1)  | ---         | (1)  | ---    | ---       | ---         | (1)  | ---        | (1) | 11.3 ± 1.5    | (3)       | ICPMS | ---              |
| Cd            | ---       | (1)  | ---         | (1)  | ---    | ---       | ---         | (1)  | ---        | (1) | 10.6          | (1)       | AAC   | ---              |
| Cl            | ---       | (1)  | < 300       | (1)  | ---    | ---       | ---         | (1)  | ---        | (1) | < 300         | (1)       | NAA   | ---              |
| Co            | 19 ± 2    | (13) | 20.1 ± 1.3  | (13) | 20     | 18.3 - 22 | 21.2 ± 0.8  | (5)  | 21 ± 2     | (5) | 19 ± 0.5      | (4)       | NAA   | ---              |
| Cr            | 17 ± 2    | (24) | 17.9 ± 1.4  | (24) | 17.6   | 16 - 20   | 18.2 ± 1.4  | (11) | 18 ± 2     | (6) | 17.8 ± 1.8    | (3)       | XRF   | 17.5 (2) ICPMS   |
| Cr            | ---       | (1)  | ---         | (1)  | ---    | ---       | ---         | (3)  | ---        | (2) | 16.2 ± 0.3    | (3)       | NAA   | ---              |
| Cr(III)       | ---       | (1)  | 14.9        | (1)  | ---    | ---       | ---         | (1)  | 14.9       | (1) | ---           | (1)       | ---   | ---              |
| Cr(VI)        | ---       | (1)  | 1.96        | (1)  | ---    | ---       | ---         | (1)  | 1.96       | (1) | ---           | (1)       | ---   | ---              |
| Cu            | 18 ± 2    | (23) | 18.3 ± 1.4  | (23) | 18     | 15.5 - 21 | 17.4 ± 1.1  | (12) | 19.1 ± 1.1 | (6) | 19 ± 0.2      | (4)       | NAA   | 21 (1) ICPMS     |
| Fe            | 88 ± 4    | (18) | 87 ± 5      | (18) | 87     | 78 - 100  | 86 ± 6      | (11) | 87 ± 4     | (5) | 88            | (2)       | NAA   | ---              |
| Hg            | < 0.2     | (1)  | 0.2         | (1)  | ---    | ---       | ---         | (3)  | ---        | (2) | 0.2           | (1)       | ICPMS | ---              |
| K             | 2         | (5)  | 1.7 ± 0.2   | (5)  | 1.7    | 1.5 - 2.1 | 1.65 ± 0.16 | (3)  | 1.9        | (2) | ---           | (1)       | ---   | ---              |
| Li            | ---       | (1)  | 7           | (1)  | ---    | ---       | ---         | (4)  | ---        | (4) | 7.0           | (1)       | ICPMS | ---              |
| Mg            | 8         | (7)  | 7.80 ± 0.06 | (7)  | 7.8    | 7.7 - 7.9 | 7.80 ± 0.08 | (4)  | 8.1 ± 0.6  | (4) | ---           | (4)       | NAA   | ---              |
| Mn            | 31 ± 2    | (18) | 31.6 ± 1.4  | (18) | 32     | 28 - 34   | 32.1 ± 1.2  | (9)  | 31 ± 2     | (6) | 29 ± 4        | (4)       | NAA   | ---              |
| Mo            | 95 ± 6    | (14) | 100 ± 4     | (14) | 97     | 94 - 108  | 98 ± 5      | (5)  | 100 ± 5    | (4) | 100 ± 3       | (4)       | NAA   | 108 (1) ICPMS    |
| NO3           | ---       | (1)  | 1.0         | (1)  | ---    | ---       | ---         | (3)  | ---        | (2) | 1.0           | (1)       | ISE   | ---              |
| Na            | 9         | (6)  | 9.3 ± 0.4   | (6)  | 9.2    | 8.9 - 10  | 9.1 ± 0.3   | (4)  | 10.4 ± 1.4 | (3) | ---           | (2)       | ICPMS | 56 (2) NAA       |
| Ni            | 55 ± 3    | (19) | 54 ± 4      | (19) | 55     | 47 - 62   | 54 ± 2      | (8)  | 55 ± 6     | (6) | 51.5          | (2)       | ICPMS | ---              |
| Pb            | 27 ± 1    | (15) | 27.3 ± 1.5  | (15) | 27     | 24.1 - 30 | 27.5 ± 0.9  | (8)  | 26         | (2) | 27.4          | (1)       | AAC   | ---              |
| Pb            | ---       | (1)  | ---         | (1)  | ---    | ---       | ---         | (2)  | ---        | (2) | 28.3          | (2)       | ICPMS | ---              |
| Pb            | ---       | (1)  | ---         | (1)  | ---    | ---       | ---         | (2)  | ---        | (2) | 26.1          | (2)       | FAAC  | ---              |
| Se            | 11 ± 1    | (6)  | 11.2 ± 0.8  | (6)  | 11     | 10 - 12   | 11.1 ± 0.7  | (5)  | ---        | (4) | 12            | (1)       | ICPMS | ---              |
| Sr            | 239 ± 5   | (9)  | 227 ± 16    | (9)  | 232    | 200 - 246 | 236         | (1)  | 239 ± 6    | (4) | 213 ± 12      | (4)       | ICPMS | ---              |
| U             | ---       | (1)  | < 0.01      | (1)  | ---    | ---       | ---         | (4)  | ---        | (4) | < 0.01        | (4)       | NAA   | ---              |
| V             | 53 ± 3    | (13) | 53 ± 2      | (13) | 52     | 50 - 56   | 54.2 ± 1.7  | (4)  | 52.0 ± 1.8 | (4) | 51.8 ± 1.2    | (4)       | NAA   | 50 (2) ICPMS     |
| Zn            | 72 ± 4    | (23) | 68 ± 6      | (23) | 68     | 57 - 77   | 66 ± 6      | (11) | 68 ± 4     | (6) | 69.5 ± 2.6    | (3)       | NAA   | 69 ± 3 (3) ICPMS |

TABLE 1643A-2: INDIVIDUAL DATA FOR NBS SRM 1643A (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Be (ng/g)</u> |       |     |        |           |
| 2.7              |       |     | FAA    | 82GLA 02  | 18.6             | 1     |     | ICPES  | 82DEM 01  |
| 2.8              | 0.1   |     | FAA    | 84GLA 02  | 19               | 0.4   |     | ICPES  | 85HEE 01  |
| 2.8              | 0.4   |     | FAA    | 85GAU 04  | 19               | 1     | 11  | ICPES  | 85NIS 01  |
| 3.4              | 0.5   |     | ICPES  | 82DEM 01  | 19               | 1     | 11  | ICPES  | 85NIS 01  |
| 3.5              |       |     | ICPMS  | 85DAT 01  | 24               |       |     | ICPMS  | 85DAT 01  |
| 3.5              | 1     | 6   | ICPMS  | 83DOU 01  |                  |       |     |        |           |
| 3.6              | 1.1   |     | FAA    | 84GLA 11  |                  |       |     |        |           |
| 3.8              | 0.4   |     | FAA    | 83JEN 01  |                  |       |     |        |           |
| 3.9              | 1     | 6   | ICPMS  | 83DOU 01  |                  |       |     |        |           |
| <u>Al (ng/g)</u> |       |     |        |           | <u>Ca (ug/g)</u> |       |     |        |           |
| 57               | 6     |     | FAA    | 82JEN 02  | 26.5             | 0.5   | 11  | ICPES  | 85NIS 01  |
| 121              | 8     |     | UU     | 83LIN 01  | 26.9             | 0.8   |     | AA     | 84GLA 02  |
| 129              | 10    |     | RTNA   | 83GRE 01  | 27               | 0.5   | 11  | ICPES  | 85NIS 01  |
|                  |       |     |        |           | 27.4             |       |     | AA     | 84GLA 11  |
|                  |       |     |        |           | 27.5             | 1.4   |     | AA     | 85GAU 04  |
|                  |       |     |        |           | 27.6             | 0.7   |     | ICPES  | 85LAN 02  |
|                  |       |     |        |           | 28               | 1     |     | ICPES  | 85HEE 01  |
|                  |       |     |        |           | 30               | 4     |     | FAA    | 82GLA 02  |
| <u>As (ng/g)</u> |       |     |        |           | <u>Cd (ng/g)</u> |       |     |        |           |
| <                | 70    |     | ICPES  | 85LAN 02  | 5                | 1     |     | FAA    | 82JEN 02  |
| 70               | 4     |     | FAA    | 84GLA 02  | 8.4              | 0.8   |     | FAA    | 85BRE 01  |
| 71               | 5     |     | FAA    | 84GLA 11  | 9                | 1.4   |     | ICPES  | 85KIM 01  |
| 72               | 62    |     | ICPES  | 85KIM 01  | 9.3              | 0.9   |     | FAA    | 85GAU 04  |
| 74               |       |     | ICPMS  | 85DAT 01  | 9.4              | 1     |     | RTNA   | 84BEM 01  |
| 74               | 3     |     | HAA    | 81KAH 01  | 9.8              | 1.7   |     | NAA    | 84FEN 01  |
| 75.1             | 0.8   |     | NAA    | 84FEN 01  | 10               | 2     | 6   | ICPMS  | 83DOU 01  |
| 76               | 7     |     | FAA    | 82GLA 02  | 10.1             | 0.5   |     | RTNA   | 83GRE 01  |
| 77               | 28    |     | ICPES  | 85HEE 01  | 10.1             | 0.8   |     | FAAC   | 85GAU 04  |
| 78               | 6     |     | FAA    | 85GAU 04  | 10.4             | 0.5   |     | ICPES  | 82DEM 01  |
| 79               |       |     | FAA    | 84SLA 02  | 10.6             |       |     | AAC    | 86GAU 01  |
| 80               | 1     |     | ITNA   | 83JER 01  | 10.6             | 0.2   | 11  | FAA    | 85SUB 01  |
|                  |       |     |        |           | 11               |       |     | ICPMS  | 85DAT 01  |
|                  |       |     |        |           | 11               | 0.4   |     | ICPES  | 85HEE 01  |
|                  |       |     |        |           | 11               | 1     | 11  | ICPES  | 85NIS 01  |
|                  |       |     |        |           | 11               | 1     | 11  | ICPES  | 85NIS 01  |
|                  |       |     |        |           | 11               | 2     |     | FAA    | 84GLA 02  |
|                  |       |     |        |           | 11.4             | 2.9   | 11  | FAA    | 85SUB 01  |
|                  |       |     |        |           | 12               |       |     | FAA    | 82GLA 02  |
|                  |       |     |        |           | 12.2             | 1.6   |     | ICPES  | 85LAN 02  |
|                  |       |     |        |           | 12.5             | 0.3   |     | FAA    | 83JEN 01  |
|                  |       |     |        |           | 12.5             | 1.3   |     | FAA    | 83JER 01  |
|                  |       |     |        |           | 13               | 2     | 6   | ICPMS  | 83DOU 01  |
|                  |       |     |        |           |                  |       |     |        |           |
| <u>Au (ng/g)</u> |       |     |        |           | <u>Cl (ng/g)</u> |       |     |        |           |
| 15               | 4     |     | ICPES  | 85HEE 01  | <                | 300   |     | ITNA   | 84GLA 11  |
| <u>Ba (ng/g)</u> |       |     |        |           |                  |       |     |        |           |
| 41               | 4     | 6   | ICPMS  | 83DOU 01  |                  |       |     |        |           |
| 45               | 6     |     | FAA    | 84GLA 02  |                  |       |     |        |           |
| 45               | 10    |     | AA     | 84GLA 11  |                  |       |     |        |           |
| 45.7             |       |     | ICPMS  | 85DAT 01  |                  |       |     |        |           |
| 46               | 1     |     | ICPES  | 85HEE 01  |                  |       |     |        |           |
| 48               | 3     |     | FAA    | 82GLA 02  |                  |       |     |        |           |
| 49               | 3     |     | FAA    | 85GAU 04  |                  |       |     |        |           |
| 54               | 6     | 6   | ICPMS  | 83DOU 01  |                  |       |     |        |           |

TABLE 1643A-2: INDIVIDUAL DATA FOR NBS SRM 1643A (cont.)

| Conc                  | Uncer | Com | Method | Reference | Conc                 | Uncer | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|----------------------|-------|-----|--------|-----------|
| <u>Co (ng/g)</u>      |       |     |        |           | <u>Cr(VI) (ng/g)</u> |       |     |        |           |
| 18.3                  | 1.4   |     | NAA    | 84FEN 01  | 1.96                 | 0.32  |     | ICPES  | 85COX 01  |
| 18.5                  | 1.8   |     | ICPES  | 82DEM 01  | <u>Cu (ng/g)</u>     |       |     |        |           |
| 19                    | 1     |     | RTNA   | 83GRE 01  | 10                   | 1     |     | FAA    | 82JEN 02  |
| 19                    | 1     |     | RTNA   | 82GRE 03  | 15.5                 | 1.8   |     | FAA    | 83JEN 01  |
| 19.5                  | 0.6   |     | RTNA   | 84BEM 01  | 16                   |       |     | FAA    | 82GLA 02  |
| 20                    |       |     | FAA    | 84SLA 02  | 17                   |       |     | AA     | 84GLA 11  |
| 20                    | 2     | 11  | ICPES  | 85NIS 01  | 17                   | 1     | 14  | FAA    | 84HAR 01  |
| 20                    | 2     | 11  | ICPES  | 85NIS 01  | 17                   | 2     |     | FAA    | 83JER 01  |
| 21                    | 3     | 14  | FAA    | 84HAR 01  | 17                   | 2.6   |     | FAA    | 85GAU 04  |
| 21                    | 3     | 14  | FAA    | 84HAR 01  | 17.1                 | 3.8   | 11  | FAA    | 85SUB 01  |
| 21.5                  | 2     |     | ICPES  | 85LAN 02  | 18                   | 1     | 11  | ICPES  | 85NIS 01  |
| 22                    | 3     | 14  | FAA    | 84HAR 01  | 18                   | 2     | 14  | FAA    | 84HAR 01  |
| 22                    | 3     | 14  | FAA    | 84HAR 01  | 18                   | 2     | 14  | FAA    | 84HAR 01  |
| 24                    | 4     |     | ICPES  | 85HEE 01  | 18                   | 3     |     | ICPES  | 85HEE 01  |
| <u>Cr (ng/g)</u>      |       |     |        |           | 18                   | 3     | 14  | FAA    | 84HAR 01  |
| 14.2                  | 3.4   |     | ICPES  | 85LAN 02  | 18.8                 | 2.4   |     | NAA    | 84FEN 01  |
| 16                    | 2     |     | RTNA   | 83GRE 01  | 19                   | 1     |     | FAA    | 84GLA 02  |
| 16                    | 2     |     | RTNA   | 82GRE 03  | 19                   | 2     | 11  | ICPES  | 85NIS 01  |
| 16                    | 2     | 14  | FAA    | 84HAR 01  | 19.1                 | 0.6   |     | RTNA   | 83GRE 01  |
| 16.2                  | 1.5   | D   | CPXRF  | 84SIM 02  | 19.1                 | 0.6   |     | RTNA   | 82GRE 03  |
| 16.2                  | 1.5   | 11  | CPXRF  | 84SIM 01  | 19.2                 | 2     |     | RTNA   | 84BEM 01  |
| 16.4                  | 3.1   | 11  | FAA    | 85SUB 01  | 19.3                 | 3.1   |     | ICPES  | 85LAN 02  |
| 16.6                  | 0.7   |     | RTNA   | 84BEM 01  | 19.5                 | 1.3   |     | ICPES  | 82DEM 01  |
| 17                    | 1     | 6   | ICPMS  | 83DOU 01  | 19.5                 | 3.2   | 11  | FAA    | 85SUB 01  |
| 17                    | 1     | 11  | ICPES  | 85NIS 01  | 21                   | 3     | 6   | ICPMS  | 83DOU 01  |
| 17                    | 1     |     | ICPES  | 85HEE 01  | 21                   | 10    |     | ICPES  | 85KIM 01  |
| 17.4                  | 2.2   | 11  | CPXRF  | 84SIM 01  | 31                   | 10    | 6   | ICPMS  | 83DOU 01  |
| 17.4                  | 2.2   | D   | CPXRF  | 84SIM 02  | 45                   |       | 6   | ICPMS  | 83DOU 01  |
| 17.5                  | 0.3   |     | FAA    | 84GLA 02  | <u>Fe (ng/g)</u>     |       |     |        |           |
| 17.6                  | 0.9   |     | FAA    | 85GAU 04  | 23                   | 5     |     | FAA    | 82JEN 02  |
| 18                    | 1     | 11  | ICPES  | 85NIS 01  | 78                   | 9     | 14  | FAA    | 84HAR 01  |
| 18                    | 2     | 14  | FAA    | 84HAR 01  | 80                   | 8     |     | FAA    | 83JER 01  |
| 18                    | 3     |     | FAA    | 84GLA 11  | 82                   | 4     |     | ICPES  | 85HEE 01  |
| 18                    | 4     | 6   | ICPMS  | 83DOU 01  | 82                   | 6     | 14  | FAA    | 84HAR 01  |
| 18.1                  | 2.9   | 11  | FAA    | 85SUB 01  | 83                   | 1.8   |     | ICPES  | 85LAN 02  |
| 19                    | 2     | 14  | FAA    | 84HAR 01  | 84.5                 | 2     |     | FAA    | 83JEN 01  |
| 19.8                  | 5.6   | 11  | CPXRF  | 84SIM 01  | 85                   | 2     |     | FAA    | 86GAU 01  |
| 20                    |       |     | FAA    | 82GLA 02  | 86                   | 2     |     | FAA    | 86GAU 01  |
| 20                    | 2     | 14  | FAA    | 84HAR 01  | 86                   | 7     | 14  | FAA    | 84HAR 01  |
| 20                    | 2.5   |     | ICPES  | 82DEM 01  | 87                   |       |     | FAA    | 84SLA 02  |
| 20                    | 3     |     | FAA    | 83JEN 01  | 88                   | 2.5   |     | ICPES  | 82DEM 01  |
| 20                    | 4.2   |     | ICPES  | 85KIM 01  | 88                   | 7     | 14  | FAA    | 84HAR 01  |
| 32                    |       | 6   | ICPMS  | 83DOU 01  | 88                   | 7     |     | FAA    | 84GLA 02  |
| <u>Cr(III) (ng/g)</u> |       |     |        |           | 88                   | 16    |     | RTNA   | 83GRE 01  |
| 14.9                  | 2.1   |     | ICPES  | 85COX 01  | 88                   | 16    |     | RTNA   | 82GRE 03  |
|                       |       |     |        |           | 90                   |       |     | FAA    | 84GLA 11  |
|                       |       |     |        |           | 90                   | 5     | 11  | ICPES  | 85NIS 01  |
|                       |       |     |        |           | 92                   | 6     | 11  | ICPES  | 85NIS 01  |
|                       |       |     |        |           | 100                  |       |     | FAA    | 82GLA 02  |

TABLE 1643A-2: INDIVIDUAL DATA FOR NBS SRM 1643A (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Hg (ng/g)</u> |       |     |        |           | <u>Mo (ng/g)</u> |       |     |        |           |
| <                | 4     |     | ICPES  | 85HEE 01  | 94               | 16    | 14  | FAA    | 84HAR 01  |
| 0.2              |       |     | ICPMS  | 85DAT 01  | 95               | 9     | 14  | FAA    | 84HAR 01  |
| <u>K (ug/g)</u>  |       |     |        |           | <u>Na (ug/g)</u> |       |     |        |           |
| 1.5              |       |     | FAA    | 82GLA 02  | 95.6             | 3.1   |     | ICPES  | 85LAN 02  |
| 1.62             | 0.04  |     | AA     | 84GLA 02  | 97               | 6     |     | FAA    | 84MOK 01  |
| 1.7              | 0.3   |     | ICPES  | 85HEE 01  | 97               | 6     |     | RTNA   | 83GRE 01  |
| 1.82             |       |     | AA     | 85GAU 04  | 97               | 6     |     | RTNA   | 82GRE 03  |
| 2.1              | 0.2   | 11  | ICPES  | 85NIS 01  | 97               | 8     | 11  | ICPES  | 85NIS 01  |
| <u>Li (ng/g)</u> |       |     |        |           | <u>Ni (ng/g)</u> |       |     |        |           |
| 7                |       |     | ICPMS  | 85DAT 01  | 98               | 12    | 14  | FAA    | 84HAR 01  |
| <u>Mg (ug/g)</u> |       |     |        |           | <u>Na (ug/g)</u> |       |     |        |           |
| 2.1              | 0.3   | 11  | ICPES  | 85NIS 01  | 100              | 10    | 11  | ICPES  | 85NIS 01  |
| 7.7              | 0.23  |     | AA     | 85GAU 04  | 102              | 4     |     | RTNA   | 84MOK 01  |
| 7.8              |       |     | AA     | 84GLA 11  | 103              | 4.5   |     | NAA    | 84FEN 01  |
| 7.8              | 0.13  |     | ICPES  | 85HEE 01  | 106              | 5     |     | ICPES  | 85HEE 01  |
| 7.8              | 0.2   | 11  | ICPES  | 85NIS 01  | 106              | 24    | 14  | FAA    | 84HAR 01  |
| 7.8              | 0.4   |     | AA     | 84GLA 02  | 108              |       |     | ICPMS  | 85DAT 01  |
| 7.8              | 0.4   | 11  | ICPES  | 85NIS 01  | <u>Na (ug/g)</u> |       |     |        |           |
| 7.9              | 0.3   |     | FAA    | 82GLA 02  | 8.9              | 0.4   |     | AA     | 85GAU 04  |
| 9                | 0.2   |     | ICPES  | 85LAN 02  | 9                | 0.2   |     | AA     | 84GLA 02  |
| <u>Mn (ng/g)</u> |       |     |        |           | <u>Ni (ng/g)</u> |       |     |        |           |
| 10               | 1     |     | FAA    | 82JEN 02  | 9                | 0.2   |     | FAA    | 82GLA 02  |
| 24               | 2.5   |     | ITNA   | 83JER 01  | 9.2              | 0.5   | 11  | ICPES  | 85NIS 01  |
| 28               | 2.4   |     | ICPES  | 85KIM 01  | 9.6              |       |     | AA     | 84GLA 11  |
| 30               | 2     | 11  | ICPES  | 85NIS 01  | 10               | 0.6   | 11  | ICPES  | 85NIS 01  |
| 30               | 2     | 14  | FAA    | 84HAR 01  | 12               | 0.8   |     | ICPES  | 85HEE 01  |
| 30.9             | 0.6   |     | RTNA   | 83GRE 01  | <u>Ni (ng/g)</u> |       |     |        |           |
| 30.9             | 0.6   |     | RTNA   | 82GRE 03  | 31               | 3     | 6   | ICPMS  | 83DOU 01  |
| 31               | 3     |     | FAA    | 83JEN 01  | 47               | 3     | 6   | ICPMS  | 83DOU 01  |
| 31.3             | 0.8   |     | ICPES  | 82DEM 01  | 47               | 4     |     | FAA    | 83JEN 01  |
| 31.5             | 2     |     | RTNA   | 84BEM 01  | 47               | 10    |     | ICPES  | 85HEE 01  |
| 32               |       |     | FAA    | 84GLA 11  | 50.4             | 6.3   |     | ICPES  | 85LAN 02  |
| 32               | 0.7   |     | ICPES  | 85LAN 02  | 51               | 8     | 14  | FAA    | 84HAR 01  |
| 32               | 2     | 14  | FAA    | 84HAR 01  | 52               |       |     | FAA    | 85GAU 04  |
| 32               | 3     | 14  | FAA    | 84HAR 01  | 52               | 6     | 14  | FAA    | 84HAR 01  |
| 32               | 3     |     | FAA    | 84GLA 02  | 52               | 6     | 14  | FAA    | 84HAR 01  |
| 32.5             | 3.3   |     | FAA    | 83JER 01  | 54               | 5     |     | FAA    | 83JER 01  |
| 33               | 1     |     | ICPES  | 85HEE 01  | 54               | 7     | 14  | FAA    | 84HAR 01  |
| 33               | 1     | 11  | ICPES  | 85NIS 01  | 55               |       |     | FAA    | 84GLA 11  |
| 33.5             |       |     | FAA    | 85GAU 04  | 55               | 5     | 11  | ICPES  | 85NIS 01  |
| 34               | 6     | 14  | FAA    | 84HAR 01  | 55               | 7     | 14  | FAA    | 84HAR 01  |
|                  |       |     |        |           | 56               |       | 6   | ICPMS  | 83DOU 01  |
|                  |       |     |        |           | 56               | 1.5   |     | ICPES  | 82DEM 01  |
|                  |       |     |        |           | 56               | 8     |     | RTNA   | 83GRE 01  |
|                  |       |     |        |           | 56               | 8     |     | RTNA   | 82GRE 03  |
|                  |       |     |        |           | 57               |       |     | FAA    | 82GLA 02  |
|                  |       |     |        |           | 60               | 3     | 11  | ICPES  | 85NIS 01  |
|                  |       |     |        |           | 62               | 18    |     | ICPES  | 85KIM 01  |

TABLE 1643A-2: INDIVIDUAL DATA FOR NBS SRM 1643A (cont.)

| Conc              | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|-------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>NO3 (ug/g)</u> |       |     |        |           | <u>V (ng/g)</u>  |       |     |        |           |
| 1                 |       |     | ISE    | 84GLA 02  | 44               |       | 6   | ICPMS  | 83DOU 01  |
|                   |       |     |        |           | 50               | 1     |     | ICPES  | 85HEE 01  |
|                   |       |     |        |           | 50               | 1.3   |     | NAA    | 84FEN 01  |
|                   |       |     |        |           | 51.1             | 4.8   |     | ICPES  | 85LAN 02  |
|                   |       |     |        |           | 52               | 1     |     | RTNA   | 83GRE 01  |
|                   |       |     |        |           | 52               | 1     |     | RTNA   | 82GRE 03  |
|                   |       | 11  | FAA    | 85SUB 01  | 52               | 5     | 14  | FAA    | 84HAR 01  |
|                   |       |     | FAAC   | 86GAU 01  | 53               | 1     |     | ITNA   | 83JER 01  |
|                   | 2     |     | FAA    | 82GLA 02  | 53               | 1     | 11  | ICPES  | 85NIS 01  |
|                   |       |     | FAA    | 86GAU 01  | 54               | 1     | 11  | ICPES  | 85NIS 01  |
|                   | 1     |     | FAA    | 83JEN 01  | 54               | 8     | 14  | FAA    | 84HAR 01  |
|                   | 2     |     | FAA    | 85GAU 04  | 55               | 10    | 14  | FAA    | 84HAR 01  |
|                   | 3     |     | FAAC   | 85GAU 04  | 56               | 5     | 6   | ICPMS  | 83DOU 01  |
|                   |       |     | AAC    | 86GAU 01  | 56               | 9     | 14  | FAA    | 84HAR 01  |
|                   |       |     | ICPMS  | 85DAT 01  | 71               | 12    | 6   | ICPMS  | 83DOU 01  |
|                   | 2     |     | FAA    | 84GLA 02  |                  |       |     |        |           |
|                   | 2     |     | FAA    | 84GLA 11  |                  |       |     |        |           |
|                   | 3     |     | FAA    | 83JER 01  |                  |       |     |        |           |
|                   | 9.1   | 11  | FAA    | 85SUB 01  | 21               |       | 6   | ICPMS  | 83DOU 01  |
|                   | 2     |     | ICPMS  | 83DOU 02  | 57               | 6     |     | FAA    | 82JEN 02  |
|                   | 38    |     | ICPES  | 85KIM 01  | 58               | 9     | 14  | FAA    | 84HAR 01  |
|                   | 5     |     | FAA    | 82JEN 02  | 60               | 7     | 6   | ICPMS  | 83DOU 01  |
|                   |       |     |        |           | 61               | 4.2   |     | ICPES  | 85KIM 01  |
|                   |       |     |        |           | 62               | 16    | 14  | FAA    | 84HAR 01  |
|                   |       |     |        |           | 63               |       |     | FAA    | 85GAU 04  |
|                   | 40    |     | ICPES  | 85HEE 01  | 65               | 2     |     | AA     | 84GLA 11  |
|                   | 1     |     | FAA    | 84GLA 02  | 65.1             | 0.3   |     | FAA    | 83JEN 01  |
|                   |       |     | FAA    | 84GLA 11  | 66               | 2     |     | FAA    | 84GLA 02  |
|                   |       |     | FAA    | 84SLA 02  | 68               | 1     |     | ICPES  | 85HEE 01  |
|                   | 0.5   |     | HAA    | 81KAH 01  | 68               | 5     |     | RTNA   | 82GRE 03  |
|                   |       |     | ICPMS  | 85DAT 01  | 68               | 5     |     | RTNA   | 83GRE 01  |
|                   | 0.8   |     | FAA    | 85GAU 04  | 69.7             | 2.4   |     | ICPES  | 85LAN 02  |
|                   | 40    |     | ICPES  | 85KIM 01  | 70               | 5     | 11  | ICPES  | 85NIS 01  |
|                   |       |     |        |           | 70               | 5     | 11  | ICPES  | 85NIS 01  |
|                   |       |     |        |           | 70               | 7     |     | FAA    | 83JER 01  |
|                   |       |     |        |           | 70               | 11    | 6   | ICPMS  | 83DOU 01  |
|                   |       | 6   | ICPMS  | 83DOU 01  | 70               | 12    | 14  | FAA    | 84HAR 01  |
|                   | 50    | 6   | ICPMS  | 83DOU 01  | 70.2             | 0.6   |     | ICPES  | 82DEM 01  |
|                   |       |     | ICPMS  | 85DAT 01  | 72.5             | 2     |     | RTNA   | 84BEM 01  |
|                   | 32    | 6   | ICPMS  | 83DOU 01  | 76               |       |     | FAA    | 82GLA 02  |
|                   | 5     | 11  | ICPES  | 85NIS 01  | 77               | 3     | 6   | ICPMS  | 83DOU 01  |
|                   |       |     | FAA    | 84GLA 02  | 77               | 7     | 14  | FAA    | 84HAR 01  |
|                   | 5     | 11  | ICPES  | 85NIS 01  |                  |       |     |        |           |
|                   | 2.5   |     | ICPES  | 82DEM 01  |                  |       |     |        |           |
|                   | 6     |     | ICPES  | 85HEE 01  |                  |       |     |        |           |
|                   |       |     |        |           |                  |       |     |        |           |
| <u>Sr (ng/g)</u>  |       |     |        |           | <u>Zn (ng/g)</u> |       |     |        |           |
| 200               |       | 6   | ICPMS  | 83DOU 01  | 21               |       | 6   | ICPMS  | 83DOU 01  |
| 206               | 50    | 6   | ICPMS  | 83DOU 01  | 57               | 6     |     | FAA    | 82JEN 02  |
| 220               |       |     | ICPMS  | 85DAT 01  | 58               | 9     | 14  | FAA    | 84HAR 01  |
| 225               | 32    | 6   | ICPMS  | 83DOU 01  | 60               | 7     | 6   | ICPMS  | 83DOU 01  |
| 232               | 5     | 11  | ICPES  | 85NIS 01  | 61               | 4.2   |     | ICPES  | 85KIM 01  |
| 236               |       |     | FAA    | 84GLA 02  | 62               | 16    | 14  | FAA    | 84HAR 01  |
| 239               | 5     | 11  | ICPES  | 85NIS 01  | 63               |       |     | FAA    | 85GAU 04  |
| 240               | 2.5   |     | ICPES  | 82DEM 01  | 65               | 2     |     | AA     | 84GLA 11  |
| 246               | 6     |     | ICPES  | 85HEE 01  | 65.1             | 0.3   |     | FAA    | 83JEN 01  |
|                   |       |     |        |           | 66               | 2     |     | FAA    | 84GLA 02  |
|                   |       |     |        |           | 68               | 1     |     | ICPES  | 85HEE 01  |
|                   |       |     |        |           | 68               | 5     |     | RTNA   | 82GRE 03  |
|                   |       |     |        |           | 68               | 5     |     | RTNA   | 83GRE 01  |
|                   |       |     |        |           | 69.7             | 2.4   |     | ICPES  | 85LAN 02  |
|                   |       |     |        |           | 70               | 5     | 11  | ICPES  | 85NIS 01  |
|                   |       |     |        |           | 70               | 5     | 11  | ICPES  | 85NIS 01  |
|                   |       |     |        |           | 70               | 7     |     | FAA    | 83JER 01  |
|                   |       |     |        |           | 70               | 11    | 6   | ICPMS  | 83DOU 01  |
|                   |       | 6   | ICPMS  | 83DOU 01  | 70               | 12    | 14  | FAA    | 84HAR 01  |
|                   | 50    | 6   | ICPMS  | 83DOU 01  | 70.2             | 0.6   |     | ICPES  | 82DEM 01  |
|                   |       |     | ICPMS  | 85DAT 01  | 72.5             | 2     |     | RTNA   | 84BEM 01  |
|                   | 32    | 6   | ICPMS  | 83DOU 01  | 76               |       |     | FAA    | 82GLA 02  |
|                   | 5     | 11  | ICPES  | 85NIS 01  | 77               | 3     | 6   | ICPMS  | 83DOU 01  |
|                   |       |     | FAA    | 84GLA 02  | 77               | 7     | 14  | FAA    | 84HAR 01  |
|                   | 5     | 11  | ICPES  | 85NIS 01  |                  |       |     |        |           |
|                   | 2.5   |     | ICPES  | 82DEM 01  |                  |       |     |        |           |
|                   | 6     |     | ICPES  | 85HEE 01  |                  |       |     |        |           |
|                   |       |     |        |           |                  |       |     |        |           |
| <u>U (ng/g)</u>   |       |     |        |           |                  |       |     |        |           |
| <                 | 0.01  |     | RTNA   | 84BEM 01  |                  |       |     |        |           |

TABLE 1643B-1: COMPILED DATA FOR NBS SRM 1643B TRACE ELEMENTS IN WATER (revised 3/1/86)

| ELE | UNITS | NBS        |    | CONSENSUS  |        | MEDIAN | RANGE       | AA         |        | OTHER METHODS |          |
|-----|-------|------------|----|------------|--------|--------|-------------|------------|--------|---------------|----------|
|     |       | Mean       | SD | Mean       | SD (n) |        |             | Mean       | SD (n) | Mean (n)      | Method   |
| Ag  | ng/g  | 9.8 ± 0.8  |    | 10.6       | (1)    | ---    | ---         | 10.6       | (1)    | ---           |          |
| As  | ng/g  | 49         |    | 50         | (2)    | ---    | 46 - 54     | 50         | (2)    | ---           |          |
| B   | ng/g  | 94         |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| Ba  | ng/g  | 44 ± 2     |    | 42         | (2)    | ---    | 41 - 43     | 42         | (2)    | ---           |          |
| Be  | ng/g  | 19 ± 2     |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| Bi  | ng/g  | 11         |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| Ca  | ug/g  | 35         |    | 33         | (2)    | ---    | 31 - 35     | 35         | (1)    | 31            | (1) TITR |
| Cd  | ng/g  | 20 ± 1     |    | 20.0 ± 1.2 | (4)    | 19.4   | 18.8 - 21.7 | 19.7       | (2)    | 18.8          | (1) AAC  |
| Cd  | ng/g  | ---        |    | ---        |        | ---    | ---         | ---        |        | 21.7          | (1) FAAC |
| Co  | ng/g  | 26 ± 1     |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| Cr  | ng/g  | 18.6 ± 0.4 |    | 18.4       | (2)    | ---    | 17.6 - 19.2 | 18.4       | (2)    | ---           |          |
| Cu  | ng/g  | 21.9 ± 0.4 |    | 21.7       | (2)    | ---    | 19.4 - 24   | 21.7       | (2)    | ---           |          |
| Fe  | ng/g  | 99 ± 8     |    | 98.4       | (2)    | ---    | 97.7 - 99.2 | 97.7       | (1)    | 99.2          | (1) IDMS |
| K   | ug/g  | 3          |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| Mg  | ug/g  | 15         |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| Mn  | ng/g  | 28 ± 2     |    | 26.7 ± 1.6 | (3)    | 27.2   | 25 - 28     | 26.7 ± 1.6 | (3)    | ---           |          |
| Mo  | ng/g  | 85 ± 3     |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| Na  | ug/g  | 8          |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| Ni  | ng/g  | 49 ± 3     |    | 69         | (1)    | ---    | ---         | 69         | (1)    | ---           |          |
| Pb  | ng/g  | 23.7 ± 0.7 |    | 24 ± 3     | (4)    | 22     | 21 - 27     | 25.8       | (2)    | 21            | (1) AAC  |
| Pb  | ng/g  | ---        |    | ---        |        | ---    | ---         | ---        |        | 22            | (1) FAAC |
| Se  | ng/g  | 9.7 ± 0.5  |    | 9.1        | (2)    | ---    | 9 - 9.2     | 9.1        | (2)    | ---           |          |
| Sr  | ng/g  | 227 ± 6    |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| Tl  | ng/g  | 8.0 ± 0.2  |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| V   | ng/g  | 45.2 ± 0.4 |    | ---        |        | ---    | ---         | ---        |        | ---           |          |
| Zn  | ng/g  | 66 ± 2     |    | 68.2       | (2)    | ---    | 66 - 70.5   | 68.2       | (2)    | ---           |          |

TABLE 1643B-2: INDIVIDUAL DATA FOR NBS SRM 1643B (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Fe (ng/g)</u> |       |     |        |           |
| 10.6             | 1.1   |     | FAA    | 86GAU 01  | 97.7             | 6.4   |     | FAA    | 86GAU 01  |
|                  |       |     |        |           | 99.2             | 2.5   |     | IDMS   | 84FAS 01  |
| <u>As (ng/g)</u> |       |     |        |           | <u>Mn (ng/g)</u> |       |     |        |           |
| 46               | 16    |     | FAA    | 86GAU 01  | 25               | 2     |     | FAA    | 85GAU 04  |
| 54               | 5     |     | FAA    | 85GAU 04  | 27.2             |       |     | AA     | 86GAU 01  |
|                  |       |     |        |           | 28               | 3.5   |     | FAA    | 86GAU 01  |
| <u>Ba (ng/g)</u> |       |     |        |           | <u>Ni (ng/g)</u> |       |     |        |           |
| 41               | 4     |     | FAA    | 86GAU 01  | 69               |       |     | FAA    | 85GAU 04  |
| 43               |       |     | FAA    | 85GAU 04  |                  |       |     |        |           |
| <u>Ca (ug/g)</u> |       |     |        |           | <u>Pb (ng/g)</u> |       |     |        |           |
| 31               | 2     |     | TITR   | 85GAU 04  | 21               |       |     | AAC    | 86GAU 01  |
| 35               |       |     | AA     | 85GAU 04  | 22               |       |     | FAAC   | 86GAU 01  |
| <u>Cd (ng/g)</u> |       |     |        |           | <u>Se (ng/g)</u> |       |     |        |           |
| 18.8             |       |     | AAC    | 86GAU 01  | 24.5             | 1.2   |     | FAA    | 86GAU 01  |
| 19.4             | 0.6   |     | FAA    | 86GAU 01  | 27               | 3     |     | FAA    | 85GAU 04  |
| 20               |       |     | FAA    | 85GAU 04  |                  |       |     |        |           |
| 21.7             |       |     | FAAC   | 86GAU 01  |                  |       |     |        |           |
| <u>Cr (ng/g)</u> |       |     |        |           | <u>Zn (ng/g)</u> |       |     |        |           |
| 17.6             | 1.1   |     | FAA    | 86GAU 01  | 66               | 3     |     | FAA    | 85GAU 04  |
| 19.2             | 1.8   |     | FAA    | 85GAU 04  | 70.5             | 2.1   |     | AA     | 86GAU 01  |
| <u>Cu (ng/g)</u> |       |     |        |           |                  |       |     |        |           |
| 19.4             | 1.5   |     | AA     | 86GAU 01  |                  |       |     |        |           |
| 24               | 8     |     | FAA    | 85GAU 04  |                  |       |     |        |           |

TABLE 1645-1: COMPILED DATA FOR NBS SRM 1645 RIVER SEDIMENT (revised 3/1/86)

| ELE    | UNITS | NBS         |      | CONSENSUS   |      | MEDIAN | RANGE       | AA          |      | NAA         |     | ICPES      |      | XRF         |     | OTHER METHODS |           |
|--------|-------|-------------|------|-------------|------|--------|-------------|-------------|------|-------------|-----|------------|------|-------------|-----|---------------|-----------|
|        |       | Mean ± SD   | (n)  | Mean ± SD   | (n)  |        |             | Mean ± SD   | (n)  | Mean ± SD   | (n) | Mean ± SD  | (n)  | Mean ± SD   | (n) | Method        |           |
| Ag     | ug/g  | ---         | (1)  | 1.75        | (1)  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 1.75          | (1) IDMS  |
| Al     | %     | 2.26 ± 0.04 | (9)  | 2.20 ± 0.25 | (9)  | 2.14   | 1.4 - 2.54  | 2.42        | (1)  | 2.45        | (2) | 1.9 ± 0.6  | (5)  | 1.90        | (2) | 1.4           | (1) DCPES |
| As     | ug/g  | 66          | (19) | 67 ± 3      | (19) | 66     | 62.6 - 75   | 66.0 ± 1.6  | (6)  | 67 ± 4      | (4) | 66 ± 3     | (6)  | 85          | (2) | 87            | (1) PAA   |
| As     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 71.3          | (1) DCPES |
| As     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 47            | (1) AF    |
| As     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 65            | (1) FAE   |
| B      | ug/g  | ---         | (1)  | 31          | (1)  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 31            | (1) TCGS  |
| Ba     | ug/g  | ---         | (4)  | 374 ± 26    | (4)  | 370    | 340 - 400   | ---         | ---  | 340         | (1) | 385 ± 15   | (3)  | ---         | --- | ---           | ---       |
| Be     | ug/g  | ---         | (1)  | 1.0         | (1)  | ---    | ---         | ---         | ---  | ---         | --- | 1.0        | (1)  | ---         | --- | ---           | ---       |
| Bi     | ng/g  | ---         | (1)  | 600         | (1)  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 600           | (1) AF    |
| COD    | g/kg  | 149.4 ± 9   | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | ---           | ---       |
| Ca     | %     | 2.9         | (14) | 2.65 ± 0.34 | (14) | 2.62   | 2.00 - 3.11 | 2.6         | (2)  | 2.73        | (1) | 2.5 ± 0.3  | (7)  | 2.8 ± 0.4   | (3) | 2.93          | (1) PAA   |
| Cd     | ug/g  | 10.2 ± 1.5  | (25) | 10.0 ± 0.7  | (25) | 10     | 8.9 - 11.4  | 9.6 ± 0.8   | (10) | 9.55        | (2) | 10.2 ± 1.0 | (9)  | ---         | --- | 11            | (1) PAA   |
| Cd     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 9.1           | (1) IDMS  |
| Cd     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 10.3 ± 0.2    | (3) AF    |
| Cd     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 11.4          | (1) AE-AF |
| Ce     | ug/g  | ---         | (2)  | 24          | (2)  | ---    | 20 - 28     | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 24            | (2) PAA   |
| Co     | ug/g  | 10.1 ± 0.6  | (10) | 9.4 ± 1.9   | (10) | 8.5    | 6.7 - 12.8  | 6.95        | (2)  | 8.8 ± 1.0   | (3) | 11.2 ± 1.1 | (4)  | ---         | --- | 8.5           | (1) PAA   |
| Co-60  | pci/g | ---         | ---  | < 0.06      | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | < 0.06        | GAMMA     |
| Cr     | %     | 2.96 ± 0.28 | (30) | 2.93 ± 0.31 | (30) | 2.91   | 2.1 - 3.52  | 2.92 ± 0.18 | (5)  | 3.17 ± 0.15 | (7) | 2.6 ± 0.4  | (13) | 3.16 ± 0.36 | (4) | 2.64          | (2) PAA   |
| Cr     | %     | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 2.1           | (1) DCPES |
| Cs     | ug/g  | ---         | (3)  | 2.8 ± 0.5   | (3)  | 2.69   | 2.32 - 3.3  | ---         | ---  | 2.8 ± 0.5   | (3) | ---        | ---  | ---         | --- | ---           | ---       |
| Cs-137 | pci/g | ---         | ---  | < 0.05      | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | < 0.05        | GAMMA     |
| Cu     | ug/g  | 109 ± 19    | (30) | 108 ± 11    | (30) | 108    | 84 - 128    | 109 ± 12    | (7)  | 124         | (2) | 108 ± 8    | (10) | 107 ± 21    | (4) | 106           | (1) PAA   |
| Cu     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 104           | (2) ASV   |
| Cu     | ug/g  | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 102           | (1) DCPES |
| DY     | ug/g  | ---         | (1)  | 2.0         | (1)  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 2.0           | (1) DCPES |
| Eu     | ug/g  | ---         | (2)  | 0.50        | (2)  | ---    | 0.31 - 0.70 | ---         | ---  | 0.31        | (1) | 0.7        | (1)  | ---         | --- | ---           | ---       |
| F      | ug/g  | 900         | (2)  | 1540        | (2)  | ---    | 1336 - 1740 | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 1538          | (2) ISE   |
| Fe     | %     | 11.3 ± 1.2  | (26) | 10.2 ± 1.3  | (26) | 10.4   | 7.7 - 12.9  | 10.8 ± 0.9  | (4)  | 9.5         | (2) | 10.2 ± 1.4 | (13) | 10.4 ± 1.5  | (5) | 10.51         | (1) PAA   |
| Fe     | %     | ---         | ---  | ---         | ---  | ---    | ---         | ---         | ---  | ---         | --- | ---        | ---  | ---         | --- | 7.9           | (1) DCPES |

TABLE 1645-1: COMPILED DATA FOR NBS SRM 1645 RIVER SEDIMENT (cont.)

| ELE          | UNITS | NBS<br>Mean ± SD | CONSENSUS<br>Mean ± SD (n) | MEDIAN | RANGE         | AA              |                 | NAA           |        | ICPES           |        | XRF           |                | OTHER METHODS |        |
|--------------|-------|------------------|----------------------------|--------|---------------|-----------------|-----------------|---------------|--------|-----------------|--------|---------------|----------------|---------------|--------|
|              |       |                  |                            |        |               | Mean ± SD (n)   | Mean ± SD (n)   | Mean ± SD (n) | SD (n) | Mean ± SD (n)   | SD (n) | Mean ± SD (n) | SD (n)         | Mean ± SD (n) | Method |
| Ga           | ug/g  | ---              | 41 ± 23 (4)                | 38     | 14 - 71       | ---             | ---             | ---           | ---    | 38 (1)          | ---    | 55.5 (2)      | 14 (1)         | DCPES         |        |
| Gd           | ug/g  | ---              | 1.06 (2)                   | ---    | 0.96 - 1.16   | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 1.06 (2)       | TCGS          |        |
| Hf           | ug/g  | ---              | 1.39 (1)                   | ---    | ---           | ---             | 1.39 (1)        | ---           | ---    | ---             | ---    | ---           | ---            | ---           |        |
| Hg           | ug/g  | 1.1 ± 0.5        | 0.99 ± 0.21 (12)           | 0.949  | 0.67 - 1.30   | 0.96 ± 0.19 (5) | 1.07 ± 0.17 (4) | ---           | ---    | 0.83 (1)        | ---    | ---           | 1.3 (1)        | PAA           |        |
| Hg           | ug/g  | ---              | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 0.55 (2)       | AF            |        |
| In           | ng/g  | ---              | < 790                      | ---    | ---           | ---             | < 790           | ---           | ---    | ---             | ---    | ---           | ---            | ---           |        |
| K            | %     | 1.26 ± 0.05      | 1.02 ± 0.25 (8)            | 0.893  | 0.608 - 1.40  | ---             | ---             | ---           | ---    | 1.05 ± 0.18 (3) | ---    | 1.0 ± 0.3 (5) | ---            | ---           |        |
| K-40         | pCi/g | ---              | 11.36 (2)                  | ---    | 11.36 - 11.36 | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 11.36 (1)      | GAMMA         |        |
| LOI          | %     | 10.72 ± 0.28     | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | ---            | ---           |        |
| La           | ug/g  | 9                | 24 (2)                     | ---    | 15 - 33       | ---             | ---             | ---           | ---    | 15 (1)          | ---    | ---           | 33 (1)         | DCPES         |        |
| Mg           | %     | 0.74 ± 0.02      | 0.72 ± 0.08 (12)           | 0.684  | 0.603 - 0.843 | 0.75 (1)        | 0.603 (1)       | ---           | ---    | 0.73 ± 0.09 (9) | ---    | ---           | 0.684 (1)      | PAA           |        |
| Mn           | ug/g  | 785 ± 97         | 752 ± 34 (20)              | 750    | 700 - 838     | 744 ± 30 (4)    | 762 (1)         | ---           | ---    | 777 ± 54 (9)    | ---    | 700 (1)       | 750 (1)        | PAA           |        |
| Mn           | ug/g  | ---              | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 770 (1)        | DCPES         |        |
| Mn           | ug/g  | ---              | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 746 (1)        | AE-AF         |        |
| Mo           | ug/g  | ---              | 34 ± 8 (3)                 | 37     | 25 - 40       | ---             | ---             | ---           | ---    | 37 (1)          | ---    | ---           | 25 (1)         | PAA           |        |
| Mo           | ug/g  | ---              | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 40 (1)         | DCPES         |        |
| N (Kjeldahl) | ug/g  | 797 ± 48         | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | ---            | ---           |        |
| Na           | ug/g  | 5400 ± 100       | 5100 ± 600 (8)             | 5200   | 4100 - 5600   | 3200 (1)        | 5600 (1)        | ---           | ---    | 5040 ± 640 (5)  | ---    | 4700 (1)      | 5450 (1)       | PAA           |        |
| Nb           | ug/g  | ---              | 16 (2)                     | ---    | 1.4 - 30      | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 1.4 (1)        | PAA           |        |
| Nb           | ug/g  | ---              | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 30 (1)         | DCPES         |        |
| Ni           | ug/g  | 45.8 ± 2.9       | 46 ± 5 (27)                | 46     | 33 - 57.8     | 43 ± 2 (5)      | 55 (1)          | ---           | ---    | 50 ± 5 (9)      | ---    | 37 ± 10 (5)   | 46 (1)         | DCPES         |        |
| Ni           | ug/g  | ---              | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 47.4 ± 0.7 (4) | PAA           |        |
| Ni           | ug/g  | ---              | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 37.6 (1)       | AE-AF         |        |
| Oil&Gr %     | %     | 1.71 ± 0.26      | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | ---            | ---           |        |
| P            | ug/g  | 510 ± 10         | 470 ± 40 (4)               | 452    | 429 - 527     | ---             | ---             | ---           | ---    | 447 ± 16 (3)    | ---    | ---           | 527 (1)        | DCPES         |        |
| Pb           | ug/g  | 714 ± 28         | 710 ± 29 (29)              | 705    | 631 - 771     | 701 ± 18 (11)   | ---             | ---           | ---    | 705 ± 47 (10)   | ---    | 720 ± 14 (4)  | 724 (1)        | PAA           |        |
| Pb           | ug/g  | ---              | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 631 (1)        | AF            |        |
| Pb           | ug/g  | ---              | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 708 (2)        | ASV           |        |
| Pb           | ug/g  | ---              | ---                        | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 771 (1)        | AE-AF         |        |
| Pd           | ng/g  | ---              | 1.0 (1)                    | ---    | ---           | ---             | ---             | ---           | ---    | ---             | ---    | ---           | 1.0 (1)        | IDMS          |        |

TABLE 1645-1: COMPILED DATA FOR NBS SRM 1645 RIVER SEDIMENT (cont.)

| ELE UNITS    | NBS<br>Mean ± SD | CONSENSUS   |      | MEDIAN | RANGE        | AA        |     | MAA         |     | ICPES     |     | XRF        |     | OTHER METHODS |           |
|--------------|------------------|-------------|------|--------|--------------|-----------|-----|-------------|-----|-----------|-----|------------|-----|---------------|-----------|
|              |                  | Mean ± SD   | (n)  |        |              | Mean ± SD | (n) | Mean ± SD   | (n) | Mean ± SD | (n) | Mean ± SD  | (n) | Method        |           |
| Pr ug/g      | ---              | 14          | (1)  | ---    | ---          | ---       | --- | ---         | --- | 14        | (1) | ---        | --- | ---           | ---       |
| Ra-226 pCi/g | ---              | 0.86        | (2)  | ---    | 0.86 - 0.86  | ---       | --- | ---         | --- | ---       | --- | ---        | --- | 0.86          | (1) GAMMA |
| Rb ug/g      | ---              | 41 ± 4      | (6)  | 39     | 38 - 50      | ---       | --- | 45.7        | (2) | ---       | --- | 38.7 ± 0.6 | (3) | 40            | (1) PAA   |
| S %          | 1.1              | 4.35        | (2)  | ---    | 3.68 - 5.02  | ---       | --- | ---         | --- | ---       | --- | 4.35       | (2) | ---           | ---       |
| Sb ug/g      | 51               | 31 ± 6      | (11) | 33.2   | 21.7 - 47.2  | 33 ± 10   | (4) | 31 ± 7      | (7) | 38        | (1) | ---        | --- | 52            | (1) PAA   |
| Sc ug/g      | 2.0              | 2.6         | (2)  | ---    | 2.13 - 3.1   | ---       | --- | 2.6         | (2) | ---       | --- | ---        | --- | ---           | ---       |
| Se ug/g      | 1.5              | 1.27 ± 0.35 | (5)  | 1.3    | 0.85 - 5     | 1.7       | (1) | 1.2 ± 0.3   | (3) | 3         | (2) | ---        | --- | ---           | ---       |
| Se(IV) ug/g  | ---              | 0.02        | (1)  | ---    | ---          | 0.02      | (1) | ---         | --- | ---       | --- | ---        | --- | ---           | ---       |
| Se(VI) ug/g  | ---              | 0.08        | (1)  | ---    | ---          | 0.08      | (1) | ---         | --- | ---       | --- | ---        | --- | ---           | ---       |
| Si %         | ---              | 23.3 ± 2.7  | (5)  | 23.6   | 19.7 - 27.27 | 23.6      | (1) | 27.27       | (1) | 22.2      | (1) | 19.7       | (1) | 23.7          | (1) DCPES |
| Sm ug/g      | ---              | 1.24        | (2)  | ---    | 1.22 - 1.26  | ---       | --- | ---         | --- | ---       | --- | ---        | --- | 1.24          | (2) TCGS  |
| Sn ug/g      | ---              | 360 ± 50    | (3)  | 366    | 313 - 416    | 340       | (2) | 416         | (1) | ---       | --- | ---        | --- | ---           | ---       |
| Sr ug/g      | ---              | 880 ± 90    | (8)  | 870    | 747 - 1033   | ---       | --- | ---         | --- | 920 ± 240 | (3) | 943 ± 70   | (4) | 856           | (2) PAA   |
| Ta ng/g      | ---              | 220         | (1)  | ---    | ---          | ---       | --- | 220         | (1) | ---       | --- | ---        | --- | ---           | ---       |
| Te ug/g      | ---              | 4.6         | (1)  | ---    | ---          | ---       | --- | ---         | --- | ---       | --- | ---        | --- | 4.6           | (1) IDMS  |
| Th ug/g      | 1.62 ± 0.22      | 18 ± 16     | (3)  | 19     | 1.8 - 34     | ---       | --- | ---         | --- | ---       | --- | 26.5       | (2) | 1.8           | (1) PAA   |
| Ti ug/g      | ---              | 500 ± 160   | (10) | 491    | 245 - 700    | 700       | (1) | ---         | --- | 410 ± 180 | (6) | 374        | (2) | 734           | (2) PAA   |
| Ti ug/g      | ---              | ---         | ---  | ---    | ---          | ---       | --- | ---         | --- | ---       | --- | ---        | --- | 600           | (1) DCPES |
| Tl ug/g      | 1.44 ± 0.07      | 3.65        | (2)  | ---    | 1.9 - 5.4    | 5.4       | (1) | ---         | --- | ---       | --- | ---        | --- | 1.9           | (1) PAA   |
| U ug/g       | 1.11 ± 0.05      | 1.15 ± 0.19 | (7)  | 1.16   | 0.8 - 1.4    | ---       | --- | 1.11 ± 0.17 | (6) | ---       | --- | ---        | --- | 1.4           | (1) PAA   |
| V ug/g       | 23.5 ± 6.9       | 26 ± 4      | (13) | 26     | 17.9 - 34    | 19.8      | (2) | 29          | (1) | 27 ± 3    | (8) | 26         | (1) | 34            | (1) DCPES |
| W ug/g       | ---              | 54          | (1)  | ---    | ---          | ---       | --- | ---         | --- | ---       | --- | ---        | --- | 54            | (1) DCPES |
| Y ug/g       | ---              | 7.2         | (2)  | ---    | 7 - 7.4      | ---       | --- | ---         | --- | 7         | (1) | ---        | --- | 7.4           | (1) PAA   |
| Yb ng/g      | ---              | 600         | (1)  | ---    | ---          | ---       | --- | ---         | --- | 600       | (1) | ---        | --- | ---           | ---       |
| Zn ug/g      | 1720 ± 170       | 1700 ± 110  | (31) | 1726   | 1414 - 1878  | 1710 ± 80 | (5) | 1610        | (2) | 1720 ± 90 | (9) | 1610 ± 210 | (6) | 1635          | (2) PAA   |
| Zn ug/g      | ---              | ---         | ---  | ---    | ---          | ---       | --- | ---         | --- | ---       | --- | ---        | --- | 1720          | (1) AE-AF |
| Zn ug/g      | ---              | ---         | ---  | ---    | ---          | ---       | --- | ---         | --- | ---       | --- | ---        | --- | 1760 ± 30     | (3) AF    |
| Zn ug/g      | ---              | ---         | ---  | ---    | ---          | ---       | --- | ---         | --- | ---       | --- | ---        | --- | 1500          | (1) DCPES |
| Zr ug/g      | ---              | 61 ± 9      | (3)  | 57     | 55 - 71      | ---       | --- | ---         | --- | ---       | --- | ---        | --- | 63            | (2) PAA   |
| Zr ug/g      | ---              | ---         | ---  | ---    | ---          | ---       | --- | ---         | --- | ---       | --- | ---        | --- | 57            | (1) DCPES |

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (revised 3/1/86)

| Conc             | Uncer  | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|--------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ug/g)</u> |        |     |        |           | <u>Ba (ug/g)</u> |       |     |        |           |
| 1.75             |        |     | IDMS   | 83LOS 01  | 178              | 15    |     | PAA    | 80KAT 01  |
|                  |        |     |        |           | 340              | 50    | 35  | ITNA   | 81GLA 02  |
|                  |        |     |        |           | 370              | 36    | 11  | ICPES  | 84NAD 01  |
|                  |        |     |        |           | 385              | 42    | 11  | ICPES  | 84NAD 01  |
|                  |        |     |        |           | 400              |       |     | ICPES  | 80FLO 01  |
| <u>Al (%)</u>    |        |     |        |           | <u>Be (ug/g)</u> |       |     |        |           |
| 0.5              |        |     | ICPES  | 84SUN 01  | 1                |       |     | ICPES  | 80FLO 01  |
| 0.66             |        |     | ICPES  | 84SUN 01  |                  |       |     |        |           |
| 0.9              |        | 11  | ICPES  | 84WOL 01  |                  |       |     |        |           |
| 1.4              | 0.1    |     | DCPES  | 81CAN 01  |                  |       |     |        |           |
| 1.68             |        | 6   | EXRF   | 84JEN 01  |                  |       |     |        |           |
| 2.09             | 0.32   | 11  | ICPES  | 84NAD 01  |                  |       |     |        |           |
| 2.11             |        | 6   | EXRF   | 84JEN 01  |                  |       |     |        |           |
| 2.14             |        |     | ICPES  | 84SUN 01  |                  |       |     |        |           |
| 2.18             | 0.028  |     | ICPES  | 84HIR 01  |                  |       |     |        |           |
| 2.23             | 0.11   | 11  | ICPES  | 84NAD 01  |                  |       |     |        |           |
| 2.37             | 0.04   | 35  | ITNA   | 81GLA 02  |                  |       |     |        |           |
| 2.42             | 0.12   |     | AA     | 81FAR 01  |                  |       |     |        |           |
| 2.5392           | 0.1587 |     | ITNA   | 85PEN 01  |                  |       |     |        |           |
| 3.9              |        |     | ICPES  | 80FLO 01  |                  |       |     |        |           |
| 6.9              |        | 11  | ICPES  | 84WOL 01  |                  |       |     |        |           |
| 23.8             |        | 11  | ICPES  | 84WOL 01  |                  |       |     |        |           |
| <u>As (ug/g)</u> |        |     |        |           | <u>Bi (ng/g)</u> |       |     |        |           |
| 47               |        |     | AF     | 85NAR 02  |                  |       |     |        |           |
| 62.6             | 2.1    |     | RTNA   | 82ELS 02  |                  |       |     |        |           |
| 63               |        |     | ICPES  | 85NAR 02  |                  |       |     |        |           |
| 64               | 3.6    |     | FAA    | 85FAN 01  |                  |       |     |        |           |
| 65               |        | 11  | FAA    | 83XIA 01  |                  |       |     |        |           |
| 65               | 1      |     | ICPES  | 84LIV 01  |                  |       |     |        |           |
| 65               | 1      |     | FAE    | 80DSI 01  |                  |       |     |        |           |
| 66               |        |     | HAA    | 80AGE 03  |                  |       |     |        |           |
| 66               |        | 11  | FAA    | 83XIA 01  |                  |       |     |        |           |
| 66               | 5      |     | IENA   | 82GLA 02  |                  |       |     |        |           |
| 66               | 13     | 11  | ICPES  | 84NAD 01  |                  |       |     |        |           |
| 66.4             |        |     | ICPES  | 81GOJ 01  |                  |       |     |        |           |
| 66.6             | 4.3    |     | FAA    | 83LOV 01  |                  |       |     |        |           |
| 67               |        |     | ICPES  | 82NYG 01  |                  |       |     |        |           |
| 68               |        |     | IENA   | 84GLA 02  |                  |       |     |        |           |
| 68.7             | 4.1    |     | FAA    | 83CAR 01  |                  |       |     |        |           |
| 71               |        |     | ICPES  | 80FLO 01  |                  |       |     |        |           |
| 71.3             | 1.3    |     | DCPES  | 84URA 01  |                  |       |     |        |           |
| 72               |        |     | ITNA   | 81SLO 01  |                  |       |     |        |           |
| 75               |        |     | WXRF   | 84ZSO 01  |                  |       |     |        |           |
| 87               |        |     | PAA    | 80BER 01  |                  |       |     |        |           |
| 95               |        | 6   | EXRF   | 84JEN 01  |                  |       |     |        |           |
| 172              |        | 6   | EXRF   | 84JEN 01  |                  |       |     |        |           |
| <u>B (ug/g)</u>  |        |     |        |           | <u>Cd (ug/g)</u> |       |     |        |           |
| 31               | 3      |     | TCGS   | 84GLA 01  | 7.2              | 0.4   | 11  | FAA    | 83CAR 01  |
|                  |        |     |        |           | 7.6              | 0.4   |     | AA     | 83CAR 01  |
|                  |        |     |        |           | 8.9              | 0.4   |     | RTNA   | 80VAL 01  |
|                  |        |     |        |           | 8.9              | 0.8   |     | ICPES  | 84MAR 01  |
|                  |        |     |        |           | 9                |       |     | ICPES  | 84SUN 01  |
|                  |        |     |        |           | 9.1              | 0.3   |     | IDMS   | 80ROS 01  |
|                  |        |     |        |           | 9.2              | 0.5   |     | FAA    | 81FAR 01  |
|                  |        |     |        |           | 9.3              | 0.1   | 11  | AA     | 82SAK 01  |
|                  |        |     |        |           | 9.4              |       | 11  | FAA    | 83CAR 01  |
|                  |        |     |        |           | 9.5              |       |     | ICPES  | 84SUN 01  |
|                  |        |     |        |           | 9.55             | 0.22  | 11  | AA     | 82SAK 01  |
|                  |        |     |        |           | 9.8              |       | 11  | AA     | 84WOL 01  |

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Cd (ug/g) cont.</u> |       |     |        |           | <u>Cr (%)</u>         |       |     |        |           |
| 10                     |       | 11  | AA     | 84WOL 01  | 1.88                  | 0.27  | 11  | ICPES  | 84NAD 01  |
| 10                     |       |     | ICPES  | 84SUN 01  | 1.98                  | 0.24  | 11  | ICPES  | 84NAD 01  |
| 10                     |       |     | ICPES  | 80FLO 01  | 2                     |       |     | ICPES  | 84SUN 01  |
| 10.1                   |       | 6   | AF     | 84NAR 02  | 2.1                   | 0.2   |     | DCPES  | 81CAN 01  |
| 10.1                   | 0.6   | 11  | AA     | 83HSU 01  | 2.29                  | 0.08  |     | PAA    | 80KAT 01  |
| 10.2                   | 0.4   |     | RTNA   | 79DER 01  | 2.5                   | 0.4   |     | RTNA   | 77MEL 01  |
| 10.25                  |       |     | AF     | 85NAR 02  | 2.66                  |       |     | EXRF   | 83MAH 03  |
| 10.3                   |       | 11  | AA     | 84WOL 01  | 2.67                  | 0.03  |     | ICPES  | 84HIR 01  |
| 10.5                   |       | 6   | AF     | 84NAR 02  | 2.7                   |       | 11  | ICPES  | 84WOL 01  |
| 10.5                   | 0.4   | 11  | AA     | 83HSU 01  | 2.7                   | 0.2   |     | FAA    | 83CAR 01  |
| 10.8                   |       |     | ICPES  | 85NAR 02  | 2.8                   |       |     | ICPES  | 84SUN 01  |
| 10.8                   | 2     |     | ICPES  | 82SCH 04  | 2.8                   | 0.17  |     | AA     | 83CAR 01  |
| 11                     |       |     | PAA    | 80BER 01  | 2.85                  |       |     | ICPES  | 84SUN 01  |
| 11.2                   |       | 6   | ICPES  | 83CHA 01  | 2.88                  |       | 6   | ICPES  | 83CHA 01  |
| 11.4                   | 4.3   |     | AE-AF  | 82GOL 01  | 2.9                   |       | 11  | ICPES  | 84WOL 01  |
| 11.98                  |       | 6   | ICPES  | 83CHA 01  | 2.91                  | 0.01  | 11  | AA     | 82SAK 01  |
|                        |       |     |        |           | 2.91                  | 0.24  |     | ICPES  | 82SCH 04  |
|                        |       |     |        |           | 2.93                  |       | 6   | ICPES  | 83CHA 01  |
|                        |       |     |        |           | 2.97                  | 0.125 | 11  | RTNA   | 76STE 01  |
|                        |       |     |        |           | 2.98                  |       |     | PAA    | 80BER 01  |
|                        |       |     |        |           | 2.99                  | 0.13  | 35  | ITNA   | 81GLA 02  |
|                        |       |     |        |           | 3                     |       | 11  | ICPES  | 84WOL 01  |
|                        |       |     |        |           | 3                     | 0.27  | 11  | AA     | 82SAK 01  |
|                        |       |     |        |           | 3.02                  |       |     | ICPES  | 80FLO 01  |
|                        |       |     |        |           | 3.15                  | 0.147 | 11  | RTNA   | 76STE 01  |
|                        |       |     |        |           | 3.16                  | 0.152 | 11  | RTNA   | 76STE 01  |
|                        |       |     |        |           | 3.18                  | 0.08  |     | AA     | 81FAR 01  |
|                        |       |     |        |           | 3.19                  | 0.038 | 6   | XRF    | 80IWA 01  |
|                        |       |     |        |           | 3.25                  | 0.049 | 6   | XRF    | 80IWA 01  |
|                        |       |     |        |           | 3.25                  | 0.152 | 11  | RTNA   | 76STE 01  |
|                        |       |     |        |           | 3.2706                | 0.155 |     | ITNA   | 76STE 01  |
|                        |       |     |        |           | 3.4                   | 0.148 | 11  | RTNA   | 76STE 01  |
|                        |       |     |        |           | 3.52                  |       | 6   | XRF    | 78TAK 01  |
|                        |       |     |        |           | 4.17                  |       | 6   | EXRF   | 84JEN 01  |
|                        |       |     |        |           | 6.28                  |       | 6   | EXRF   | 84JEN 01  |
|                        |       |     |        |           | <u>Cs (ug/g)</u>      |       |     |        |           |
|                        |       |     |        |           | 2.32                  | 0.13  | 35  | ITNA   | 81GLA 02  |
|                        |       |     |        |           | 2.69                  | 0.14  |     | ITNA   | 84GLA 11  |
|                        |       |     |        |           | 3.3                   | 0.2   |     | RTNA   | 77MEL 01  |
|                        |       |     |        |           | <u>Cs-137 (pCi/g)</u> |       |     |        |           |
|                        |       |     |        |           | <                     | 0.05  |     | GAMMA  | 84KRI 01  |
|                        |       |     |        |           | <                     | 0.05  |     | UU     | 84MEL 01  |
|                        |       |     |        |           | <u>Co-60 (pCi/g)</u>  |       |     |        |           |
|                        |       |     |        |           | <                     | 0.06  |     | UU     | 84MEL 01  |
|                        |       |     |        |           | <                     | 0.06  |     | GAMMA  | 84KRI 01  |

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Cu (ug/g)</u> |       |     |        |           | <u>Fe (%)</u>    |       |     |        |           |
| 78               |       | 6   | XRF    | 78TAK 01  | 7.7              |       |     | ICPES  | 84SUN 01  |
| 84               |       | 6   | ICPES  | 83CHA 01  | 7.9              | 0.4   |     | DCPES  | 81CAN 01  |
| 90               |       | 6   | ICPES  | 83CHA 01  | 8.372            |       | 6   | XRF    | 78TAK 01  |
| 90.9             | 11.2  |     | AA     | 84KAN 01  | 8.5              | 0.5   |     | RTNA   | 77MEL 01  |
| 96               | 14    |     | ASV    | 81DOG 01  | 8.8              |       | 11  | ICPES  | 84WOL 01  |
| 98               |       | 11  | VV     | 84WOL 01  | 9.05             | 0.19  | 11  | ICPES  | 84NAD 01  |
| 100              | 20    |     | AA     | 77YAN 01  | 9.25             | 0.11  | 11  | ICPES  | 84NAD 01  |
| 101              |       | 11  | VV     | 84WOL 01  | 9.5              |       | 11  | ICPES  | 84WOL 01  |
| 101              | 4.2   |     | ICPES  | 84HIR 01  | 9.7              | 0.5   |     | AA     | 83CAR 01  |
| 102              | 8     |     | DCPES  | 81CAN 01  | 9.74             | 0.12  |     | ICPES  | 84HIR 01  |
| 103              | 8     |     | FAA    | 83CAR 01  | 9.89             |       | 6   | XRF    | 78TAK 01  |
| 105              |       |     | ICPES  | 84SUN 01  | 10.3             |       |     | ICPES  | 84SUN 01  |
| 105              | 14    |     | ICPES  | 82SCH 04  | 10.4             |       | 6   | XRF    | 78TAK 01  |
| 106              |       |     | PAA    | 80BER 01  | 10.4             |       |     | ICPES  | 84SUN 01  |
| 108              |       | 6   | XRF    | 78TAK 01  | 10.5             | 0.3   | 35  | ITNA   | 81GLA 02  |
| 108              |       | 11  | VV     | 84WOL 01  | 10.51            | 0.18  |     | PAA    | 80KAT 01  |
| 108              | 5     | 11  | ICPES  | 84NAD 01  | 10.6             | 0.3   |     | AA     | 81FAR 01  |
| 108              | 11    |     | ICPES  | 84SOB 01  | 11               |       | 6   | ICPES  | 83CHA 01  |
| 109              | 6     |     | AA     | 83CAR 01  | 11.2             |       |     | EXRF   | 83MAH 03  |
| 111              | 5     |     | ASV    | 83MAD 01  | 11.2             | 0.6   | 11  | AA     | 82SAK 01  |
| 111              | 7     |     | FAA    | 81FAR 01  | 11.4             | 1.3   |     | ICPES  | 82SCH 04  |
| 112              |       |     | ICPES  | 84SUN 01  | 11.5             |       |     | ICPES  | 80FLO 01  |
| 112              |       |     | ICPES  | 84SUN 01  | 11.5             |       | 6   | ICPES  | 83CHA 01  |
| 113              |       | 6   | XRF    | 78TAK 01  | 11.8             | 0.2   | 11  | AA     | 82SAK 01  |
| 115              | 7     | 11  | ICPES  | 84NAD 01  | 12.3             |       | 6   | EXRF   | 84JEN 01  |
| 119              |       |     | ICPES  | 80FLO 01  | 12.9             |       | 11  | ICPES  | 84WOL 01  |
| 123              | 6     |     | RTNA   | 79DER 01  | 20.1             |       | 6   | EXRF   | 84JEN 01  |
| 124              | 4     | 11  | AA     | 82SAK 01  |                  |       |     |        |           |
| 125              | 3     | 11  | AA     | 82SAK 01  | <u>Ga (ug/g)</u> |       |     |        |           |
| 125.2            | 8.2   |     | RTNA   | 80VAL 01  | 14               | 1     |     | DCPES  | 81CAN 01  |
| 128              |       |     | WXRF   | 84ZSO 01  | 38               |       |     | ICPES  | 80FLO 01  |
| 190              | 66    |     | EXRF   | 83MAH 03  | 40               |       | 6   | EXRF   | 84JEN 01  |
| 213              |       | 6   | EXRF   | 84JEN 01  | 71               |       | 6   | EXRF   | 84JEN 01  |
| 379              |       | 6   | EXRF   | 84JEN 01  |                  |       |     |        |           |
| <u>Dy (ug/g)</u> |       |     |        |           | <u>Gd (ug/g)</u> |       |     |        |           |
| 2                | 0.2   |     | DCPES  | 81CAN 01  | 0.96             | 0.14  | 4   | TCGS   | 85GLA 05  |
|                  |       |     |        |           | 1.16             | 0.15  | 4   | TCGS   | 85GLA 05  |
| <u>Eu (ug/g)</u> |       |     |        |           | <u>Hf (ug/g)</u> |       |     |        |           |
| 0.31             | 0.03  | 35  | ITNA   | 81GLA 02  | 1.39             | 0.07  | 35  | ITNA   | 81GLA 02  |
| 0.7              |       |     | ICPES  | 80FLO 01  |                  |       |     |        |           |
| <u>F (ug/g)</u>  |       |     |        |           |                  |       |     |        |           |
| 1336             | 97    |     | ISE    | 83BET 02  |                  |       |     |        |           |
| 1740             | 60    |     | ISE    | 83KNA 01  |                  |       |     |        |           |

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

| Conc                | Uncer  | Com | Method | Reference | Conc                | Uncer | Com | Method | Reference |
|---------------------|--------|-----|--------|-----------|---------------------|-------|-----|--------|-----------|
| <u>Hg (ug/g)</u>    |        |     |        |           | <u>Mg (%) cont.</u> |       |     |        |           |
| 0.4                 |        | 6   | AF     | 84NAR 02  | 0.75                | 0.02  |     | AA     | 81FAR 01  |
| 0.67                | 0.07   |     | FAA    | 83CAR 01  | 0.78                |       |     | ICPES  | 84SUN 01  |
| 0.7                 |        | 6   | AF     | 84NAR 02  | 0.82                |       |     | ICPES  | 84SUN 01  |
| 0.83                | 0.05   |     | ICPES  | 84MAR 01  | 0.84                |       |     | ICPES  | 84SUN 01  |
| 0.85                | 0.036  |     | CVAA   | 80NAD 01  | 0.8426              |       | 11  | ICPES  | 84WOL 01  |
| 0.937               | 0.36   |     | RTNA   | 84DEL 01  | 2.1                 | 0.1   |     | AA     | 83CAR 01  |
| 0.949               | 0.055  |     | RTNA   | 84DRA 01  | 2.3                 |       |     | XRF    | 83CAR 01  |
| 1.05                | 0.19   |     | CVAA   | 81KAH 01  | 4.1                 |       |     | ICPES  | 80FLO 01  |
| 1.1                 | 0.04   |     | CVAA   | 83CAR 01  |                     |       |     |        |           |
| 1.1                 | 0.1    |     | RTNA   | 77MEL 01  | <u>Mn (ug/g)</u>    |       |     |        |           |
| 1.11                | 0.26   |     | CVAA   | 80WHI 01  | 700                 |       |     | EXRF   | 83MAH 03  |
| 1.3                 |        |     | PAA    | 80BER 01  | 707                 | 7.2   |     | ICPES  | 84HIR 01  |
| 1.3                 | 0.2    |     | RTNA   | 80VAL 01  | 710                 | 40    | 11  | ICPES  | 84NAD 01  |
|                     |        |     |        |           | 716                 | 110   | 11  | AA     | 82SAK 01  |
| <u>In (ng/g)</u>    |        |     |        |           | 721                 |       | 11  | VV     | 84WOL 01  |
| <                   | 790    |     | RTNA   | 83BER 01  | 723                 | 77    | 11  | AA     | 82SAK 01  |
|                     |        |     |        |           | 735                 |       | 11  | VV     | 84WOL 01  |
|                     |        |     |        |           | 746                 | 130   |     | AE-AF  | 82GOL 01  |
|                     |        |     |        |           | 750                 |       |     | ICPES  | 80FLO 01  |
| <u>K (%)</u>        |        |     |        |           | 750                 |       | 11  | VV     | 84WOL 01  |
| 0.04                |        |     | ICPES  | 84SUN 01  | 750                 | 18    |     | PAA    | 80KAT 01  |
| 0.09                | 0.002  |     | AA     | 83CAR 01  | 756                 | 15    |     | AA     | 83CAR 01  |
| 0.15                |        |     | ICPES  | 84SUN 01  | 760                 | 30    | 11  | ICPES  | 84NAD 01  |
| 0.608               |        | 6   | EXRF   | 84JEN 01  | 762                 | 9     | 35  | ITNA   | 81GLA 02  |
| 0.857               |        | 6   | EXRF   | 84JEN 01  | 768                 | 85    |     | ICPES  | 82SCH 04  |
| 0.87                | 0.12   | 11  | ICPES  | 84NAD 01  | 770                 | 30    |     | DCPES  | 81CAN 01  |
| 0.893               |        | 6   | XRF    | 78TAK 01  | 780                 | 90    |     | AA     | 81FAR 01  |
| 1.06                | 0.13   | 11  | ICPES  | 84NAD 01  | 793                 | 52    |     | ICPES  | 84SOB 01  |
| 1.22                |        |     | ICPES  | 84SUN 01  | 798                 |       |     | ICPES  | 84SUN 01  |
| 1.24                |        | 6   | XRF    | 78TAK 01  | 838                 |       |     | ICPES  | 84SUN 01  |
| 1.4                 |        |     | EXRF   | 83MAH 03  | 870                 |       |     | ICPES  | 84SUN 01  |
|                     |        |     |        |           | 1460                |       | 6   | XRF    | 78TAK 01  |
|                     |        |     |        |           | 3321                |       | 6   | XRF    | 78TAK 01  |
| <u>K-40 (pCi/g)</u> |        |     |        |           | <u>Mo (ug/g)</u>    |       |     |        |           |
| 11.36               |        |     | UU     | 84MEL 01  | 25                  |       |     | PAA    | 80BER 01  |
| 11.36               |        |     | GAMMA  | 84KRI 01  | 37                  | 1.9   |     | ICPES  | 84HIR 01  |
|                     |        |     |        |           | 40                  | 2     |     | DCPES  | 81CAN 01  |
| <u>La (ug/g)</u>    |        |     |        |           | <u>Na (ug/g)</u>    |       |     |        |           |
| 15                  |        |     | ICPES  | 80FLO 01  | 1600                |       |     | ICPES  | 84SUN 01  |
| 33                  | 3      |     | DCPES  | 81CAN 01  | 2050                |       |     | ICPES  | 84SUN 01  |
|                     |        |     |        |           | 3200                | 100   |     | AA     | 83CAR 01  |
|                     |        |     |        |           | 4100                | 500   | 11  | ICPES  | 84NAD 01  |
|                     |        |     |        |           | 4700                |       |     | XRF    | 83CAR 01  |
|                     |        |     |        |           | 4700                | 400   | 11  | ICPES  | 84NAD 01  |
|                     |        |     |        |           | 5200                |       |     | ICPES  | 84SUN 01  |
|                     |        |     |        |           | 5450                | 110   |     | PAA    | 80KAT 01  |
|                     |        |     |        |           | 5600                |       | 6   | ICPES  | 83CHA 01  |
|                     |        |     |        |           | 5600                |       | 6   | ICPES  | 83CHA 01  |
|                     |        |     |        |           | 5600                | 200   | 35  | ITNA   | 81GLA 02  |
| <u>Mg (%)</u>       |        |     |        |           |                     |       |     |        |           |
| 0.603               | 0.1809 |     | ITNA   | 85PEN 01  |                     |       |     |        |           |
| 0.62                | 0.16   | 11  | ICPES  | 84NAD 01  |                     |       |     |        |           |
| 0.65                | 0.02   | 11  | ICPES  | 84NAD 01  |                     |       |     |        |           |
| 0.67                | 0.0092 |     | ICPES  | 84HIR 01  |                     |       |     |        |           |
| 0.6823              |        | 11  | ICPES  | 84WOL 01  |                     |       |     |        |           |
| 0.684               | 0.01   |     | PAA    | 80KAT 01  |                     |       |     |        |           |
| 0.7095              |        | 11  | ICPES  | 84WOL 01  |                     |       |     |        |           |

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Nb (ug/g)</u> |       |     |        |           | <u>Pb (ug/g) cont.</u> |       |     |        |           |
| 1.4              | 0.07  |     | PAA    | 80KAT 01  | 684                    | 35    |     | FAA    | 83CAR 01  |
| 30               | 3     |     | DCPES  | 81CAN 01  | 685                    |       | 11  | AA     | 84WOL 01  |
|                  |       |     |        |           | 685                    | 10    | 11  | AA     | 82SAK 01  |
|                  |       |     |        |           | 693                    |       |     | ICPES  | 85NAR 02  |
|                  |       |     |        |           | 695                    | 45    |     | ASV    | 81DOG 01  |
|                  |       |     |        |           | 701                    |       | 6   | ICPES  | 83CHA 01  |
|                  |       |     |        |           | 704                    |       | 6   | ICPES  | 83CHA 01  |
|                  |       |     |        |           | 705                    |       | 11  | AA     | 84WOL 01  |
|                  |       |     |        |           | 705                    |       | 6   | EXRF   | 84JEN 01  |
|                  |       |     |        |           | 705                    | 35    |     | AA     | 83CAR 01  |
|                  |       |     |        |           | 717                    |       | 6   | XRF    | 78TAK 01  |
|                  |       |     |        |           | 718                    | 28    | 11  | AA     | 83HSU 01  |
|                  |       |     |        |           | 719                    |       | 6   | XRF    | 78TAK 01  |
|                  |       |     |        |           | 721                    | 20    |     | ICPES  | 82SCH 04  |
|                  |       |     |        |           | 721                    | 26    | 11  | AA     | 83HSU 01  |
|                  |       |     |        |           | 722                    | 18    |     | ASV    | 83MAD 01  |
|                  |       |     |        |           | 724                    |       |     | PAA    | 80BER 01  |
|                  |       |     |        |           | 724                    | 43    | 11  | AA     | 82SAK 01  |
|                  |       |     |        |           | 725                    |       |     | ICPES  | 80FLO 01  |
|                  |       |     |        |           | 725                    |       | 11  | AA     | 84WOL 01  |
|                  |       |     |        |           | 732                    |       |     | ICPES  | 84SUN 01  |
|                  |       |     |        |           | 740                    |       |     | EXRF   | 83MAH 03  |
|                  |       |     |        |           | 745                    |       |     | ICPES  | 84SUN 01  |
|                  |       |     |        |           | 768                    |       |     | ICPES  | 84SUN 01  |
|                  |       |     |        |           | 771                    | 231   |     | AE-AF  | 82GOL 01  |
|                  |       |     |        |           | 1019                   |       | 6   | XRF    | 78TAK 01  |
|                  |       |     |        |           | 1270                   |       | 6   | EXRF   | 84JEN 01  |
|                  |       |     |        |           | <u>Pd (ng/g)</u>       |       |     |        |           |
|                  |       |     |        |           | 1                      |       |     | IDMS   | 83LOS 01  |
|                  |       |     |        |           | <u>Pr (ug/g)</u>       |       |     |        |           |
|                  |       |     |        |           | 14                     |       |     | ICPES  | 80FLO 01  |
|                  |       |     |        |           | <u>Ra-226 (pCi/g)</u>  |       |     |        |           |
|                  |       |     |        |           | 0.86                   |       |     | UU     | 84MEL 01  |
|                  |       |     |        |           | 0.86                   |       |     | GAMMA  | 84KRI 01  |
|                  |       |     |        |           | <u>Rb (ug/g)</u>       |       |     |        |           |
|                  |       |     |        |           | 38                     |       | 6   | XRF    | 78TAK 01  |
|                  |       |     |        |           | 39                     |       | 6   | EXRF   | 84JEN 01  |
|                  |       |     |        |           | 39                     |       | 6   | XRF    | 78TAK 01  |
|                  |       |     |        |           | 40                     | 2     |     | PAA    | 80KAT 01  |
|                  |       |     |        |           | 41.4                   | 0.5   |     | RTNA   | 77MEL 01  |
|                  |       |     |        |           | 50                     | 7     | 35  | ITNA   | 81GLA 02  |
|                  |       |     |        |           | 70                     |       | 6   | EXRF   | 84JEN 01  |
|                  |       |     |        |           | <u>P (ug/g)</u>        |       |     |        |           |
| 429              | 9     | 11  | ICPES  | 84NAD 01  |                        |       |     |        |           |
| 452              | 27    |     | ICPES  | 84HIR 01  |                        |       |     |        |           |
| 459              | 31    | 11  | ICPES  | 84NAD 01  |                        |       |     |        |           |
| 526.9            | 6.4   |     | DCPES  | 84URA 01  |                        |       |     |        |           |
|                  |       |     |        |           | <u>Pb (ug/g)</u>       |       |     |        |           |
| 538              | 39    | 11  | ICPES  | 84NAD 01  |                        |       |     |        |           |
| 597              | 40    | 11  | ICPES  | 84NAD 01  |                        |       |     |        |           |
| 631              |       |     | AF     | 85NAR 02  |                        |       |     |        |           |
| 670              | 22    |     | ICPES  | 84MAR 01  |                        |       |     |        |           |
| 680              | 20    |     | AA     | 77YAN 01  |                        |       |     |        |           |
| 683              | 29    |     | FAA    | 81FAR 01  |                        |       |     |        |           |

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

| Conc                 | Uncer | Com | Method | Reference | Conc                 | Uncer  | Com | Method | Reference |
|----------------------|-------|-----|--------|-----------|----------------------|--------|-----|--------|-----------|
| <u>S (%)</u>         |       |     |        |           | <u>Si (%)</u>        |        |     |        |           |
| 3.68                 |       | 6   | EXRF   | 84JEN 01  | 15.4                 |        | 6   | EXRF   | 84JEN 01  |
| 5.02                 |       | 6   | EXRF   | 84JEN 01  | 19.7                 |        | 6   | EXRF   | 84JEN 01  |
| <u>Sb (ug/g)</u>     |       |     |        |           | 22.2                 | 1.1    | 11  | ICPES  | 84NAD 01  |
| 5.9                  |       |     | AF     | 85NAR 02  | 23.6                 |        |     | AA     | 83FAR 01  |
| 21.7                 |       |     | RTNA   | 81NIS 01  | 23.7                 | 1.9    |     | DCPES  | 81CAN 01  |
| 22.6                 |       |     | RTNA   | 81KIB 01  | 27.2728              | 2.1949 |     | ITNA   | 85PEN 01  |
| 25                   |       |     | HAA    | 81YAM 01  | <u>Sm (ug/g)</u>     |        |     |        |           |
| 28.3                 | 1.2   |     | FAA    | 82MAT 02  | 1.22                 | 0.14   | 4   | TCGS   | 85GLA 05  |
| 31                   | 4     |     | ITNA   | 81HAM 01  | 1.26                 | 0.14   | 4   | TCGS   | 85GLA 05  |
| 32.2                 | 3.2   | 11  | FAA    | 83CAR 01  | <u>Sn (ug/g)</u>     |        |     |        |           |
| 33.2                 |       |     | RTNA   | 81SLO 01  | 6                    |        |     | AF     | 85NAR 02  |
| 33.6                 | 2.2   |     | RTNA   | 82ELS 02  | 313                  | 9      |     | FAA    | 82MAT 02  |
| 36                   |       |     | ITNA   | 81SLO 01  | 366                  |        |     | FAA    | 84LON 01  |
| 38                   |       |     | ICPES  | 82NYG 01  | 416                  | 15     |     | RTNA   | 83BER 01  |
| 40                   | 5     | 35  | ITNA   | 81GLA 02  | <u>Sr (ug/g)</u>     |        |     |        |           |
| 47.2                 |       | 11  | FAA    | 83CAR 01  | 747                  | 38     | 11  | ICPES  | 84NAD 01  |
| 52                   |       |     | PAA    | 80BER 01  | 814                  | 43     | 11  | ICPES  | 84NAD 01  |
| 66                   |       |     | ICPES  | 85NAR 02  | 851                  | 13     |     | PAA    | 80KAT 01  |
| <u>Sc (ug/g)</u>     |       |     |        |           | 862                  |        |     | PAA    | 80BER 01  |
| <                    | 2     |     | DCPES  | 81CAN 01  | 870                  |        | 6   | XRF    | 78TAK 01  |
| 2.13                 | 0.07  | 35  | ITNA   | 81GLA 02  | 910                  |        |     | EXRF   | 83MAH 03  |
| 3.1                  | 0.5   |     | RTNA   | 77MEL 01  | 960                  |        | 6   | EXRF   | 84JEN 01  |
| <u>Se (ug/g)</u>     |       |     |        |           | 1033                 |        | 6   | XRF    | 78TAK 01  |
| 0.85                 |       |     | RTNA   | 81SLO 01  | 1200                 |        |     | ICPES  | 80FLO 01  |
| 1                    |       |     | ICPES  | 81GOU 01  | 1750                 |        | 6   | EXRF   | 84JEN 01  |
| 1.3                  | 0.2   |     | RTNA   | 77MEL 01  | <u>Ta (ng/g)</u>     |        |     |        |           |
| 1.5                  | 0.1   | 35  | RTNA   | 81GLA 01  | 220                  | 20     | 35  | ITNA   | 81GLA 02  |
| 1.7                  | 0.3   |     | HAA    | 85CUT 01  | <u>Te (ug/g)</u>     |        |     |        |           |
| 5                    |       |     | ICPES  | 80FLO 01  | 4.6                  |        |     | IDMS   | 83LOS 01  |
| 8                    |       |     | ICPES  | 82NYG 01  | <u>Th (ug/g)</u>     |        |     |        |           |
| 9.8                  |       |     | ICPES  | 85NAR 02  | 1.8                  |        |     | PAA    | 80BER 01  |
| 24                   |       |     | AF     | 85NAR 02  | 19                   |        | 6   | EXRF   | 84JEN 01  |
| <u>Se(IV) (ug/g)</u> |       |     |        |           | 34                   |        | 6   | EXRF   | 84JEN 01  |
| 0.02                 | 0.01  |     | HAA    | 85CUT 01  | <u>Se(VI) (ug/g)</u> |        |     |        |           |
| 0.08                 | 0.03  |     | HAA    | 85CUT 01  | 0.08                 |        |     | HAA    | 85CUT 01  |

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ti (ug/g)</u> |       |     |        |           | <u>Y (ug/g)</u>  |       |     |        |           |
| 184              |       | 11  | ICPES  | 84WOL 01  | <                | 7     |     | DCPES  | 81CAN 01  |
| 245              |       | 11  | ICPES  | 84WOL 01  | 7                |       |     | ICPES  | 80FLO 01  |
| 258              |       | 6   | XRF    | 78TAK 01  | 7.4              | 0.3   |     | PAA    | 80KAT 01  |
| 370              |       | 11  | ICPES  | 84NAD 01  | <u>Yb (ng/g)</u> |       |     |        |           |
| 490              |       | 6   | XRF    | 78TAK 01  | <                | 2000  |     | DCPES  | 81CAN 01  |
| 491              | 14    |     | ICPES  | 84HIR 01  | 600              |       |     | ICPES  | 80FLO 01  |
| 590              |       | 11  | ICPES  | 84NAD 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| 597              |       | 11  | ICPES  | 84WOL 01  | 1254             |       |     | EXRF   | 83MAH 03  |
| 600              | 100   |     | DCPES  | 81CAN 01  | 1392             | 10    |     | ICPES  | 84HIR 01  |
| 642              | 13    |     | PAA    | 80KAT 01  | 1414             | 84    |     | RTNA   | 77MEL 01  |
| 700              |       |     | AA     | 82MAT 04  | 1480             |       | 6   | XRF    | 78TAK 01  |
| 825              |       |     | PAA    | 80BER 01  | 1500             | 100   |     | DCPES  | 81CAN 01  |
| <u>Tl (ug/g)</u> |       |     |        |           | 1540             | 67    |     | PAA    | 80KAT 01  |
| <                | 10    |     | DCPES  | 81CAN 01  | 1570             | 57    | 11  | ICPES  | 84NAD 01  |
| 1.9              |       |     | PAA    | 80BER 01  | 1587             |       |     | ICPES  | 80FLO 01  |
| 5.4              | 0.5   |     | FAA    | 83CAR 01  | 1610             | 40    |     | AA     | 77YAN 01  |
| <u>U (ug/g)</u>  |       |     |        |           | 1640             |       | 6   | XRF    | 78TAK 01  |
| 0.8              | 0.02  |     | RTNA   | 78DER 01  | 1640             | 40    |     | AA     | 81FAR 01  |
| 1.11             | 0.03  |     | DNA    | 85GAU 04  | 1660             |       | 11  | VV     | 84WOL 01  |
| 1.11             | 0.05  |     | DNA    | 86GAU 01  | 1695             |       |     | WXRF   | 84ZSO 01  |
| 1.16             |       |     | DNA    | 84GLA 02  | 1700             |       |     | ICPES  | 84SUN 01  |
| 1.17             | 0.01  |     | DNA    | 85GLA 04  | 1713             | 145   |     | ICPES  | 82SCH 04  |
| 1.3              |       |     | DNA    | 84GLA 11  | 1720             | 361   |     | AE-AF  | 82GOL 01  |
| 1.4              |       |     | PAA    | 80BER 01  | 1726             |       | 11  | VV     | 84WOL 01  |
| <u>V (ug/g)</u>  |       |     |        |           | 1730             |       |     | PAA    | 80BER 01  |
| 17.9             |       | 11  | FAA    | 83CAR 01  | 1735             | 37    | 11  | ICPES  | 84NAD 01  |
| 21.6             | 1.5   | 11  | FAA    | 83CAR 01  | 1737             |       | 6   | AF     | 84NAR 02  |
| 22               |       |     | ICPES  | 84SUN 01  | 1750             |       | 6   | AF     | 84NAR 02  |
| 24               |       |     | ICPES  | 84SUN 01  | 1750             | 19    | 11  | AA     | 82SAK 01  |
| 24.1             | 6.5   |     | ICPES  | 82SCH 04  | 1767             | 177   |     | AA     | 83CAR 01  |
| 25               |       |     | ICPES  | 80FLO 01  | 1768             | 158   |     | ICPES  | 84SOB 01  |
| 26               |       |     | WXRF   | 84ZSO 01  | 1785             |       |     | ICPES  | 85NAR 02  |
| 27               |       |     | ICPES  | 84SUN 01  | 1794             |       |     | AF     | 85NAR 02  |
| 29               | 6     | 35  | ITNA   | 81GLA 02  | 1794             |       | 6   | XRF    | 78TAK 01  |
| 29.6             |       | 11  | ICPES  | 84WOL 01  | 1795             | 25    | 11  | AA     | 82SAK 01  |
| 30.8             |       | 11  | ICPES  | 84WOL 01  | 1800             |       |     | ICPES  | 84SUN 01  |
| 31               | 0.8   |     | ICPES  | 84HIR 01  | 1800             |       |     | ICPES  | 84SUN 01  |
| 34               | 3     |     | DCPES  | 81CAN 01  | 1806             | 37    |     | RTNA   | 79DER 01  |
| 39.6             |       | 11  | ICPES  | 84WOL 01  | 1810             |       | 6   | EXRF   | 84JEN 01  |
| <u>W (ug/g)</u>  |       |     |        |           | 1878             |       | 11  | VV     | 84WOL 01  |
| 54               | 9     |     | DCPES  | 81CAN 01  | 3240             |       | 6   | EXRF   | 84JEN 01  |
| <u>Zr (ug/g)</u> |       |     |        |           | <                | 55    |     | EXRF   | 83MAH 03  |
|                  |       |     |        |           | 55               | 3     |     | PAA    | 80KAT 01  |
|                  |       |     |        |           | 57               | 6     |     | DCPES  | 81CAN 01  |
|                  |       |     |        |           | 71               |       |     | PAA    | 80BER 01  |

TABLE 1646-1: COMPILED DATA FOR NBS SRM 1646 ESTUARINE SEDIMENT (revised 3/1/86)

| ELEMENT | UNITS | NBS         |     | CONSENSUS     |     | MEDIAN | RANGE         | NAA         |     | ICPES    |        | OTHER METHODS |           |
|---------|-------|-------------|-----|---------------|-----|--------|---------------|-------------|-----|----------|--------|---------------|-----------|
|         |       | Mean ± SD   | (n) | Mean ± SD     | (n) |        |               | Mean ± SD   | (n) | Mean (n) | Method | Mean (n)      | Method    |
| Ag      | ng/g  | ---         | (1) | 88            | (1) | ---    | ---           | ---         | --- | ---      | ---    | 88            | (1) AA    |
| Al      | %     | 6.25 ± 0.2  | (5) | 5.54 ± 0.42   | (5) | 5.4    | 5.12 - 6.03   | 5.98        | (2) | 5.12     | (1)    | 5.3           | (2) DCPES |
| As      | ug/g  | 11.6 ± 1.3  | (3) | 11.1 ± 0.6    | (3) | 11.1   | 10.5 - 11.7   | 11.1        | (2) | ---      | ---    | 11.1          | (1) DCPES |
| B       | ug/g  | ---         | (2) | 82.5          | (2) | ---    | 81 - 84       | ---         | (2) | ---      | ---    | 82.5          | (2) TCGS  |
| Ba      | ug/g  | ---         | (2) | 409           | (2) | ---    | 370 - 448     | 409         | (2) | ---      | ---    | ---           | ---       |
| Be      | ug/g  | 1.5         | (1) | 1.5           | (1) | ---    | ---           | ---         | (1) | 1.5      | (1)    | ---           | ---       |
| Br      | ug/g  | ---         | (2) | 117           | (2) | ---    | 112 - 122     | 117         | (2) | ---      | ---    | ---           | ---       |
| Ca      | ug/g  | 8300 ± 300  | (2) | 8440          | (2) | ---    | 8120 - 8760   | 8760        | (1) | ---      | ---    | 8120          | (1) AA    |
| Cd      | ng/g  | 360 ± 70    | (3) | 325 ± 60      | (3) | 355    | 260 - 360     | ---         | --- | ---      | ---    | 360           | (1) IDMS  |
| Cd      | ng/g  | ---         | (4) | ---           | (4) | ---    | ---           | ---         | (3) | ---      | ---    | 260           | (1) AAC   |
| Cd      | ng/g  | ---         | (1) | ---           | (1) | ---    | ---           | ---         | (1) | ---      | ---    | 355           | (1) AA    |
| Ce      | ug/g  | 80          | (4) | 80 ± 4        | (4) | 77.2   | 76 - 84       | 81 ± 3      | (3) | 76       | (1)    | ---           | ---       |
| Cl      | %     | ---         | (1) | 1.38          | (1) | ---    | ---           | 1.38        | (1) | ---      | ---    | ---           | ---       |
| Co      | ug/g  | 10.5 ± 1.3  | (5) | 9.1 ± 1.6     | (5) | 8.0    | 7.8 - 11      | 9.4 ± 1.6   | (4) | 7.8      | (1)    | ---           | ---       |
| Cr      | ug/g  | 76 ± 3      | (7) | 76 ± 4        | (7) | 75     | 72 - 84       | 79 ± 4      | (4) | 72       | (1)    | 73            | (2) DCPES |
| Cs      | ug/g  | 3.7         | (5) | 3.69 ± 0.10   | (5) | 3.7    | 3.6 - 3.85    | 3.69 ± 0.10 | (5) | ---      | ---    | ---           | ---       |
| Cu      | ug/g  | 18 ± 3      | (4) | 17 ± 2        | (4) | 16.8   | 13.3 - 19     | ---         | (1) | 19       | (1)    | 17.8          | (1) IDMS  |
| Cu      | ug/g  | ---         | (1) | ---           | (1) | ---    | ---           | ---         | (1) | ---      | ---    | 16.8          | (1) ASV   |
| Cu      | ug/g  | ---         | (3) | ---           | (3) | ---    | ---           | ---         | (1) | ---      | ---    | 13.3          | (1) AAC   |
| DY      | ug/g  | ---         | (1) | 4.3 ± 1.6     | (1) | 4.04   | 2.8 - 5.98    | 5.98        | (1) | 4.04     | (1)    | 2.8           | (1) DCPES |
| Er      | ug/g  | ---         | (1) | 2.41          | (1) | ---    | ---           | ---         | (1) | 2.41     | (1)    | ---           | ---       |
| Eu      | ug/g  | 1.5         | (3) | 1.44 ± 0.16   | (3) | 1.36   | 1.34 - 1.62   | 1.48        | (2) | 1.36     | (1)    | ---           | ---       |
| Fe      | %     | 3.35 ± 0.1  | (6) | 3.22 ± 0.28   | (6) | 3.02   | 2.9 - 3.52    | 3.46 ± 0.07 | (3) | 3.02     | (1)    | 2.95          | (2) DCPES |
| Ga      | ug/g  | ---         | (1) | 19            | (1) | ---    | ---           | ---         | (1) | ---      | ---    | 19            | (1) DCPES |
| Gd      | ug/g  | ---         | (3) | 4.5 ± 0.7     | (3) | 4.6    | 3.7 - 5.09    | ---         | (1) | 5.09     | (1)    | 4.15          | (2) TCGS  |
| Ge      | ug/g  | 1.4         | (2) | ---           | (2) | ---    | ---           | ---         | (2) | ---      | ---    | ---           | ---       |
| Hf      | ug/g  | ---         | (1) | 11.2          | (1) | ---    | 11.1 - 11.2   | 11.2        | (2) | ---      | ---    | ---           | ---       |
| Hg      | ng/g  | 63 ± 12     | (1) | ---           | (1) | ---    | ---           | ---         | (1) | ---      | ---    | ---           | ---       |
| Ho      | ug/g  | ---         | (2) | 0.84          | (2) | ---    | ---           | ---         | (2) | 0.84     | (1)    | ---           | ---       |
| I       | ug/g  | ---         | (2) | 34.2          | (2) | ---    | 32.5 - 36     | 34.2        | (2) | ---      | ---    | ---           | ---       |
| K       | %     | 1.4         | (2) | 1.83          | (2) | ---    | 1.43 - 2.23   | 1.83        | (2) | ---      | ---    | ---           | ---       |
| La      | ug/g  | ---         | (3) | 37 ± 2        | (3) | 36     | 35.7 - 38.9   | 38.9        | (1) | 35.7     | (1)    | 36            | (1) DCPES |
| Li      | ug/g  | 49          | (1) | 46            | (1) | ---    | ---           | ---         | (1) | ---      | ---    | 46            | (1) AA    |
| Lu      | ng/g  | ---         | (3) | 380 ± 60      | (3) | 370    | 320 - 444     | 407         | (2) | 320      | (1)    | ---           | ---       |
| Mg      | %     | 1.09 ± 0.08 | (3) | 0.970 ± 0.001 | (3) | 0.97   | 0.969 - 0.970 | 0.97        | (1) | 0.969    | (1)    | 0.97          | (1) AA    |

TABLE 1646-1: COMPILED DATA FOR NBS SRM 1646 ESTUARINE SEDIMENT (cont.)

| ELEMENT | UNITS | NBS        |     | CONSENSUS   |     | MEDIAN | RANGE        | NAA         |     | ICPES    | OTHER METHODS |        |
|---------|-------|------------|-----|-------------|-----|--------|--------------|-------------|-----|----------|---------------|--------|
|         |       | Mean ± SD  | (n) | Mean ± SD   | (n) |        |              | Mean ± SD   | (n) |          | Mean (n)      | Method |
| Mn      | ug/g  | 375 ± 20   | (6) | 330 ± 46    | (6) | 328    | 270 - 385    | 368 ± 15    | (3) | 328 (1)  | 275 (2)       | DCPES  |
| Mo      | ug/g  | 2          | (2) | 14          | (2) | ---    | 9 - 19       | ---         | (3) | 9 (1)    | 19 (1)        | DCPES  |
| Na      | %     | 2          | (3) | 2.04 ± 0.19 | (3) | 2.1    | 1.82 - 2.19  | 2.04 ± 0.19 | (3) | ---      | ---           | ---    |
| Nb      | ug/g  | ---        | (1) | 53          | (1) | ---    | ---          | ---         | (2) | ---      | 53 (1)        | DCPES  |
| Nd      | ug/g  | ---        | (3) | 36 ± 4      | (3) | 34.7   | 32.6 - 40    | 36.3        | (2) | 34.7 (1) | ---           | ---    |
| Ni      | ug/g  | 32 ± 3     | (4) | 31.7 ± 0.9  | (4) | 31     | 31 - 32.8    | ---         | (2) | 32 (1)   | 31 (2)        | DCPES  |
| Ni      | ug/g  | ---        | (2) | ---         | (2) | ---    | ---          | ---         | (1) | ---      | 32.8 (1)      | AAC    |
| P       | ug/g  | 540 ± 5    | (2) | 480         | (2) | ---    | 433 - 529.6  | ---         | (1) | 433 (1)  | 529.6 (1)     | DCPES  |
| Pb      | ug/g  | 28.2 ± 1.8 | (3) | 27.8 ± 1.2  | (3) | 28     | 26.5 - 29    | ---         | (2) | ---      | 29 (1)        | AAC    |
| Pb      | ug/g  | ---        | (1) | ---         | (1) | ---    | ---          | ---         | (1) | ---      | 26.5 (1)      | ASV    |
| Pb      | ug/g  | ---        | (2) | ---         | (2) | ---    | ---          | ---         | (1) | ---      | 28 (1)        | AA     |
| Pr      | ug/g  | ---        | (1) | 8.56        | (1) | ---    | ---          | ---         | (1) | 8.56 (1) | ---           | ---    |
| Rb      | ug/g  | 87         | (2) | 87          | (2) | ---    | 83 - 91.5    | 87.2        | (2) | ---      | ---           | ---    |
| S       | %     | 0.96       | (3) | ---         | (3) | ---    | ---          | ---         | (3) | ---      | ---           | ---    |
| Sb      | ng/g  | 400        | (3) | 790 ± 160   | (3) | 610    | 610 - 910    | 790 ± 160   | (3) | ---      | ---           | ---    |
| Sc      | ug/g  | 10.8       | (6) | 10.8 ± 0.4  | (6) | 10.7   | 10.3 - 11.56 | 10.8 ± 0.4  | (6) | ---      | ---           | ---    |
| Se      | ng/g  | 600        | (3) | 530 ± 90    | (3) | 580    | 430 - 590    | ---         | (1) | 590 (1)  | 580 (1)       | GC     |
| Se      | ng/g  | ---        | (1) | ---         | (1) | ---    | ---          | ---         | (1) | ---      | 430 (1)       | AA     |
| Se(IV)  | ng/g  | ---        | (1) | 1           | (1) | ---    | ---          | ---         | (1) | ---      | 1 (1)         | AA     |
| Se(VI)  | ng/g  | ---        | (1) | 40          | (1) | ---    | ---          | ---         | (1) | ---      | 40 (1)        | AA     |
| Si      | %     | 31.0       | (2) | 30.0        | (2) | ---    | 30.0 - 30.0  | ---         | (2) | ---      | 30 (2)        | DCPES  |
| Sm      | ug/g  | ---        | (4) | 6.4 ± 0.3   | (4) | 6.21   | 6.2 - 6.8    | 6.52        | (1) | 6.21 (1) | 6.5 (2)       | TCGS   |
| Sr      | ug/g  | ---        | (1) | 220         | (1) | ---    | ---          | 220         | (1) | ---      | ---           | ---    |
| Ta      | ug/g  | ---        | (2) | 1.00        | (2) | ---    | 0.94 - 1.07  | 1.00        | (2) | ---      | ---           | ---    |
| Tb      | ug/g  | ---        | (2) | 0.95        | (2) | ---    | 0.92 - 0.98  | 0.95        | (2) | ---      | ---           | ---    |
| Te      | ng/g  | 500        | (5) | ---         | (5) | ---    | ---          | ---         | (5) | ---      | ---           | ---    |
| Th      | ug/g  | 10         | (5) | 10.0 ± 0.6  | (5) | 10.3   | 9.2 - 10.7   | 10.0 ± 0.6  | (5) | ---      | ---           | ---    |
| Ti      | ug/g  | 5100       | (5) | 4200 ± 800  | (5) | 3750   | 3600 - 5223  | 5010        | (2) | 3750 (1) | 3600 (2)      | DCPES  |
| Tl      | ug/g  | 0.5        | (1) | 16          | (1) | ---    | ---          | ---         | (5) | ---      | 16 (1)        | DCPES  |
| U       | ug/g  | ---        | (5) | 2.99 ± 0.06 | (5) | 3.00   | 2.9 - 3.07   | 2.99 ± 0.06 | (5) | ---      | ---           | ---    |
| V       | ug/g  | 94 ± 1     | (5) | 86 ± 3      | (5) | 85     | 82.3 - 89    | 82.6        | (2) | 85 (1)   | 89 (2)        | DCPES  |
| Y       | ug/g  | ---        | (2) | 18.4        | (2) | ---    | 17 - 19.9    | ---         | (2) | 19.9 (1) | 17 (1)        | DCPES  |
| Yb      | ug/g  | ---        | (4) | 2.6 ± 0.6   | (4) | 2.2    | 2.12 - 3.4   | 2.98        | (2) | 2.12 (1) | 2.2 (1)       | DCPES  |
| Zn      | ug/g  | 138 ± 6    | (4) | 124 ± 14    | (4) | 120    | 107 - 139    | ---         | (1) | 107 (1)  | 125 (2)       | DCPES  |
| Zn      | ug/g  | ---        | (2) | ---         | (2) | ---    | ---          | ---         | (1) | ---      | 139 (1)       | AA     |
| Zr      | ug/g  | ---        | (2) | 335         | (2) | ---    | 270 - 400    | 400         | (1) | ---      | 270 (1)       | DCPES  |

TABLE 1646-2: INDIVIDUAL DATA FOR NBS SRM 1646 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Cl (%)</u>    |       |     |        |           |
| 88               | 8     |     | FAA    | 83BLO 01  | 1.383            | 0.054 |     | ITNA   | 85SUN 01  |
| <u>Al (%)</u>    |       |     |        |           | <u>Co (ug/g)</u> |       |     |        |           |
| 5.12             | 0.17  |     | ICPES  | 84HIR 01  | 7.8              | 0.3   |     | ICPES  | 84HIR 01  |
| 5.2              | 0.12  |     | DCPES  | 81CAN 01  | 8                | 2     |     | ITNA   | 85HOL 01  |
| 5.4              | 0.2   |     | DCPES  | 82SIN 01  | 8                | 2     |     | IENA   | 85HOL 01  |
| 5.93             | 0.3   |     | ITNA   | 85SUN 01  | 10.6             | 0.6   |     | ITNA   | 85SUN 01  |
| 6.03             | 0.2   |     | ITNA   | 85HOL 01  | 11               | 1     |     | ITNA   | 84GLA 11  |
| <u>As (ug/g)</u> |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| 10.5             | 0.9   |     | ITNA   | 85HOL 01  | 72               | 0.3   |     | ICPES  | 84HIR 01  |
| 11.1             | 0.6   |     | DCPES  | 84URA 01  | 72               | 1     |     | DCPES  | 82SIN 01  |
| 11.7             | 2.5   |     | IENA   | 85HOL 01  | 74               | 1     |     | DCPES  | 81CAN 01  |
| <u>B (ug/g)</u>  |       |     |        |           | <u>Cs (ug/g)</u> |       |     |        |           |
| 81               | 3     |     | TCGS   | 85GAU 04  | 75               | 1     |     | ITNA   | 85HOL 01  |
| 84               | 8     |     | TCGS   | 84GLA 01  | 78.4             | 3     |     | ITNA   | 85SUN 01  |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Cu (ug/g)</u> |       |     |        |           |
| 370              |       |     | ITNA   | 84GLA 11  | 80               |       |     | ITNA   | 84GLA 11  |
| 448              | 50    |     | ITNA   | 85SUN 01  | 84               | 5     |     | ITNA   | 86GAU 01  |
| <u>Be (ug/g)</u> |       |     |        |           | <u>Dy (ug/g)</u> |       |     |        |           |
| 1.5              | 0.14  |     | ICPES  | 86GAU 01  | 2.8              | 0.21  |     | DCPES  | 81CAN 01  |
| <u>Br (ug/g)</u> |       |     |        |           | <u>Er (ug/g)</u> |       |     |        |           |
| 112              | 1     |     | ITNA   | 85SUN 01  | 2.41             | 0.04  |     | ICPES  | 85JAR 02  |
| 122              | 2     |     | IENA   | 85HOL 01  | <u>Eu (ug/g)</u> |       |     |        |           |
| <u>Ca (ug/g)</u> |       |     |        |           | 1.34             |       |     |        |           |
| 8120             |       |     | AA     | 85GAU 04  | 1.36             |       |     |        |           |
| 8760             | 620   |     | ITNA   | 85SUN 01  | 1.62             |       |     |        |           |
| <u>Cd (ng/g)</u> |       |     |        |           | 0.17             |       |     |        |           |
| 260              |       |     | AAC    | 85GAU 04  |                  |       |     |        |           |
| 355              | 40    |     | FAA    | 86GAU 01  |                  |       |     |        |           |
| 360              | 10    |     | IDMS   | 84BRO 03  |                  |       |     |        |           |
| <u>Ce (ug/g)</u> |       |     |        |           |                  |       |     |        |           |
| 76               | 0.9   |     | ICPES  | 85JAR 02  |                  |       |     |        |           |
| 77.2             | 1.6   |     | ITNA   | 85SUN 01  |                  |       |     |        |           |
| 82               |       |     | ITNA   | 84GLA 11  |                  |       |     |        |           |
| 84               | 8     |     | ITNA   | 85HOL 01  |                  |       |     |        |           |
| 110              | 4.1   |     | DCPES  | 81CAN 01  |                  |       |     |        |           |

TABLE 1646-2: INDIVIDUAL DATA FOR NBS SRM 1646 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Fe (%)</u>    |       |     |        |           | <u>Mg (%)</u>    |       |     |        |           |
| 2.9              | 0.05  |     | DCPES  | 81CAN 01  | 0.9              | 0.08  |     | IENA   | 85HOL 01  |
| 3                | 0.15  |     | DCPES  | 82SIN 01  | 0.969            | 0.015 |     | ICPES  | 84HIR 01  |
| 3.02             | 0.04  |     | ICPES  | 84HIR 01  | 0.97             |       |     | AA     | 85GAU 04  |
| 3.38             |       |     | ITNA   | 84GLA 11  | 0.97             | 0.09  |     | ITNA   | 85SUN 01  |
| 3.49             | 0.1   |     | ITNA   | 85SUN 01  |                  |       |     |        |           |
| 3.52             | 0.11  |     | ITNA   | 85HOL 01  | <u>Mn (ug/g)</u> |       |     |        |           |
| <u>Ga (ug/g)</u> |       |     |        |           | 270              | 15    |     | DCPES  | 82SIN 01  |
| 19               | 1.6   |     | DCPES  | 81CAN 01  | 280              | 5     |     | DCPES  | 81CAN 01  |
| <u>Gd (ug/g)</u> |       |     |        |           | 328              | 3     |     | ICPES  | 84HIR 01  |
| 3.7              | 0.4   | 4   | TCGS   | 85GLA 05  | 356              | 17    |     | IENA   | 85HOL 01  |
| 4.6              | 0.8   | 4   | TCGS   | 85GLA 05  | 362              | 8     |     | ITNA   | 85HOL 01  |
| 5.09             | 0.13  |     | ICPES  | 85JAR 02  | 385              | 20    |     | ITNA   | 85SUN 01  |
| <u>Hf (ug/g)</u> |       |     |        |           | <u>Mo (ug/g)</u> |       |     |        |           |
| 11.1             | 0.7   |     | ITNA   | 85SUN 01  | 9                | 0.3   |     | ICPES  | 84HIR 01  |
| 11.2             |       |     | ITNA   | 84GLA 11  | 19               | 2.5   |     | DCPES  | 81CAN 01  |
| <u>Ho (ug/g)</u> |       |     |        |           | <u>Na (%)</u>    |       |     |        |           |
| 0.84             | 0.03  |     | ICPES  | 85JAR 02  | 1.82             | 0.01  |     | IENA   | 85HOL 01  |
| <u>I (ug/g)</u>  |       |     |        |           | 2.1              | 0.2   |     | ITNA   | 85HOL 01  |
| 32.5             | 2.9   |     | ITNA   | 85SUN 01  | 2.19             | 0.02  |     | ITNA   | 85SUN 01  |
| 36               | 2     |     | IENA   | 85HOL 01  | <u>Nb (ug/g)</u> |       |     |        |           |
| <u>K (%)</u>     |       |     |        |           | 53               | 4     |     | DCPES  | 81CAN 01  |
| 1.43             | 0.17  |     | IENA   | 85HOL 01  | <u>Nd (ug/g)</u> |       |     |        |           |
| 2.23             | 0.25  |     | ITNA   | 85SUN 01  | 32.6             | 9.7   |     | ITNA   | 85SUN 01  |
| <u>La (ug/g)</u> |       |     |        |           | 34.7             | 0.6   |     | ICPES  | 85JAR 02  |
| 35.7             | 0.5   |     | ICPES  | 85JAR 02  | 40               |       |     | ITNA   | 84GLA 11  |
| 36               | 0.63  |     | DCPES  | 81CAN 01  | <u>Ni (ug/g)</u> |       |     |        |           |
| 38.9             | 1.3   |     | ITNA   | 85SUN 01  | 31               | 1.5   |     | DCPES  | 81CAN 01  |
| <u>Li (ug/g)</u> |       |     |        |           | 31               | 5     |     | DCPES  | 82SIN 01  |
| 46               |       |     | AA     | 85GAU 04  | 32               | 0.3   |     | ICPES  | 84HIR 01  |
| <u>Lu (ng/g)</u> |       |     |        |           | 32.8             | 1.7   |     | AAC    | 85GAU 04  |
| 320              |       |     | ICPES  | 85JAR 02  | <u>P (ug/g)</u>  |       |     |        |           |
| 370              |       |     | ITNA   | 84GLA 11  | 433              | 1     |     | ICPES  | 84HIR 01  |
| 444              | 18    |     | ITNA   | 85SUN 01  | 529.6            | 3.9   |     | DCPES  | 84JRA 01  |
|                  |       |     |        |           | <u>Pb (ug/g)</u> |       |     |        |           |
|                  |       |     |        |           | 26.5             |       |     | ASV    | 83MAD 01  |
|                  |       |     |        |           | 28               | 4     |     | FAA    | 86GAU 01  |
|                  |       |     |        |           | 29               | 1     |     | AAC    | 85GAU 04  |

TABLE 1646-2: INDIVIDUAL DATA FOR NBS SRM 1646 (cont.)

| Conc                 | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|----------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Pr (ug/g)</u>     |       |     |        |           | <u>Ta (ug/g)</u> |       |     |        |           |
| 8.56                 | 0.19  |     | ICPES  | 85JAR 02  | 0.94             |       |     | ITNA   | 84GLA 11  |
|                      |       |     |        |           | 1.07             | 0.16  |     | ITNA   | 85SUN 01  |
| <u>Rb (ug/g)</u>     |       |     |        |           | <u>Tb (ug/g)</u> |       |     |        |           |
| 83                   |       |     | ITNA   | 84GLA 11  | 0.92             |       |     | ITNA   | 84GLA 11  |
| 91.5                 | 4.6   |     | ITNA   | 85SUN 01  | 0.98             | 0.16  |     | ITNA   | 85SUN 01  |
| <u>Sb (ng/g)</u>     |       |     |        |           | <u>Th (ug/g)</u> |       |     |        |           |
| 330                  | 80    |     | IENA   | 85HOL 01  | 9.2              | 0.4   |     | IENA   | 85HOL 01  |
| 610                  |       |     | ITNA   | 84GLA 11  | 9.6              |       |     | ITNA   | 84GLA 11  |
| 850                  |       |     | ITNA   | 84GLA 02  | 10.3             | 0.4   |     | ITNA   | 85SUN 01  |
| 910                  | 250   |     | ITNA   | 85SUN 01  | 10.4             | 1     |     | ITNA   | 86GAU 01  |
| <u>Sc (ug/g)</u>     |       |     |        |           | <u>Ti (ug/g)</u> |       |     |        |           |
| 10.3                 | 0.4   |     | ITNA   | 84GLA 11  | 3600             | 100   |     | DCPES  | 81CAN 01  |
| 10.4                 | 0.2   |     | ITNA   | 84GLA 02  | 3600             | 360   |     | DCPES  | 82SIN 01  |
| 10.7                 | 0.6   |     | IENA   | 85HOL 01  | 3750             | 150   |     | ICPES  | 84HIR 01  |
| 10.9                 | 0.4   |     | ITNA   | 85HOL 01  | 4800             | 200   |     | ITNA   | 85HOL 01  |
| 11                   | 0.2   |     | ITNA   | 85SUN 01  | 5223             | 278   |     | ITNA   | 85SUN 01  |
| 11.56                | 0.06  |     | ITNA   | 86GAU 01  | <u>Tl (ug/g)</u> |       |     |        |           |
| <u>Se (ng/g)</u>     |       |     |        |           | 16               | 2.7   |     | DCPES  | 81CAN 01  |
| 430                  | 20    |     | HAA    | 85CUT 01  | <u>U (ug/g)</u>  |       |     |        |           |
| 580                  | 50    |     | GC     | 83SIU 01  | 2.9              |       |     | DNA    | 84GLA 11  |
| 590                  | 60    |     | ICPES  | 83SIU 01  | 2.96             | 0.09  |     | DNA    | 85GAU 04  |
| <u>Se(IV) (ng/g)</u> |       |     |        |           | 3                |       |     | DNA    | 84GLA 02  |
| 1                    | 0.6   |     | HAA    | 85CUT 01  | 3.01             | 0.1   |     | DNA    | 86GAU 01  |
| <u>Se(VI) (ng/g)</u> |       |     |        |           | 3.07             | 0.48  |     | ITNA   | 85SUN 01  |
| 40                   | 20    |     | HAA    | 85CUT 01  | <u>V (ug/g)</u>  |       |     |        |           |
| <u>Si (%)</u>        |       |     |        |           | 82.3             | 3     |     | ITNA   | 85SUN 01  |
| 30                   | 0.52  |     | DCPES  | 81CAN 01  | 83               | 5     |     | ITNA   | 85HOL 01  |
| 30                   | 1.2   |     | DCPES  | 82SIN 01  | 85               | 4.2   |     | ICPES  | 84HIR 01  |
| <u>Sm (ug/g)</u>     |       |     |        |           | 89               | 2.3   |     | DCPES  | 81CAN 01  |
| 6.2                  | 0.6   | 4   | TCGS   | 85GLA 05  | 89               | 9     |     | DCPES  | 82SIN 01  |
| 6.21                 | 0.13  |     | ICPES  | 85JAR 02  | <u>Y (ug/g)</u>  |       |     |        |           |
| 6.52                 | 0.19  |     | ITNA   | 85SUN 01  | 17               | 1.4   |     | DCPES  | 81CAN 01  |
| 6.8                  | 0.6   | 4   | TCGS   | 85GLA 05  | 19.9             | 0.4   |     | ICPES  | 85JAR 02  |
| <u>Sr (ug/g)</u>     |       |     |        |           |                  |       |     |        |           |
| 220                  | 73    |     | ITNA   | 85SUN 01  |                  |       |     |        |           |

TABLE 1646-2: INDIVIDUAL DATA FOR NBS SRM 1646 (cont.)

| <u>Conc</u>      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------|--------------|------------|---------------|------------------|
| <u>Yb (ug/g)</u> |              |            |               |                  |
| 2.12             | 0.02         |            | ICPES         | 85JAR 02         |
| 2.2              | 0.08         |            | DCPES         | 81CAN 01         |
| 2.56             | 0.13         |            | ITNA          | 85SUN 01         |
| 3.4              |              |            | ITNA          | 84GLA 11         |
| <u>Zn (ug/g)</u> |              |            |               |                  |
| 107              | 3            |            | ICPES         | 84HIR 01         |
| 120              | 8            |            | DCPES         | 82SIN 01         |
| 130              | 1            |            | DCPES         | 81CAN 01         |
| 139              |              |            | AA            | 85GAU 04         |
| <u>Zr (ug/g)</u> |              |            |               |                  |
| 270              | 12           |            | DCPES         | 81CAN 01         |
| 400              |              |            | ITNA          | 84GLA 11         |

TABLE 1647-1: COMPILED DATA FOR NBS SRM 1647 PRIORITY POLLUTANT POLYNUCLEAR AROMATIC HYDROCARBONS (IN ACETONITRILE)

| COMPOUND               | CAS #  | UNITS | NBS         |  | CONSENSUS       |     | MEDIAN | RANGE       | METHOD |
|------------------------|--------|-------|-------------|--|-----------------|-----|--------|-------------|--------|
|                        |        |       | Mean ± SD   |  | Mean ± SD       | (n) |        |             |        |
| Acenaphthene           | 83329  | mg/L  | 21.0 ± 0.4  |  | ---             |     | ---    | ---         | ---    |
| Acenaphthylene         | 208968 | mg/L  | 19.1 ± 0.2  |  | ---             |     | ---    | ---         | ---    |
| Anthracene             | 120127 | mg/L  | 3.29 ± 0.10 |  | ---             |     | ---    | ---         | ---    |
| Benz[a]anthracene      | 56553  | mg/L  | 5.03 ± 0.10 |  | ---             |     | ---    | ---         | ---    |
| Benzo[b]fluoranthene   | 205992 | mg/L  | 5.11 ± 0.10 |  | ---             |     | ---    | ---         | ---    |
|                        | 205992 | ug/g  | ---         |  | 2.44 ± 0.13 (5) |     | 2.34   | 2.34 - 2.65 | HPLC   |
| Benzo[k]fluoranthene   | 207089 | mg/L  | 5.02 ± 0.10 |  | ---             |     | ---    | ---         | ---    |
|                        | 207089 | ug/g  | ---         |  | 2.4 ± 0.7 (6)   |     | 2.42   | 1.22 - 3.17 | HPLC   |
| Benzo[ghi]perylene     | 191242 | mg/L  | 4.01 ± 0.10 |  | ---             |     | ---    | ---         | ---    |
| Benzo[a]pyrene         | 50328  | mg/L  | 5.3 ± 0.1   |  | ---             |     | ---    | ---         | ---    |
| Chrysene               | 218019 | mg/L  | 4.68 ± 0.10 |  | ---             |     | ---    | ---         | ---    |
| Dibenz[a,h]anthracene  | 53703  | mg/L  | 3.68 ± 0.10 |  | ---             |     | ---    | ---         | ---    |
| Fluoranthene           | 206440 | mg/L  | 10.1 ± 0.2  |  | ---             |     | ---    | ---         | ---    |
| Fluorene               | 86737  | mg/L  | 4.92 ± 0.10 |  | ---             |     | ---    | ---         | ---    |
| Indeno[1,2,3-cd]pyrene | 193395 | mg/L  | 4.06 ± 0.10 |  | ---             |     | ---    | ---         | ---    |
| Naphthalene            | 91203  | mg/L  | 22.5 ± 0.2  |  | ---             |     | ---    | ---         | ---    |
| Perylene               | 198550 | ug/g  | ---         |  | < 0.1           |     | ---    | ---         | HPLC   |
| Phenanthrene           | 85018  | mg/L  | 5.06 ± 0.10 |  | ---             |     | ---    | ---         | ---    |
| Pyrene                 | 129000 | mg/L  | 9.84 ± 0.10 |  | ---             |     | ---    | ---         | ---    |

TABLE 1647-2: INDIVIDUAL DATA FOR NBS SRM 1647

| Conc                               | Uncer | Com | Method | Reference |
|------------------------------------|-------|-----|--------|-----------|
| <u>Benzo[b]fluoranthene (ug/g)</u> |       |     |        |           |
| 1.04                               |       | 12  | HPLC   | 850TT 01  |
| 2.34                               |       | 12  | HPLC   | 850TT 01  |
| 2.34                               |       | 12  | HPLC   | 850TT 01  |
| 2.39                               |       | 12  | HPLC   | 850TT 01  |
| 2.47                               |       | 12  | HPLC   | 850TT 01  |
| 2.65                               |       | 12  | HPLC   | 850TT 01  |
| <u>Benzo[k]fluoranthene (ug/g)</u> |       |     |        |           |
| 1.22                               |       | 12  | HPLC   | 850TT 01  |
| 2.04                               |       | 12  | HPLC   | 850TT 01  |
| 2.42                               |       | 12  | HPLC   | 850TT 01  |
| 2.42                               |       | 12  | HPLC   | 850TT 01  |
| 2.86                               |       | 12  | HPLC   | 850TT 01  |
| 3.17                               |       | 12  | HPLC   | 850TT 01  |
| <u>Perylene (ug/g)</u>             |       |     |        |           |
| <                                  | 0.1   |     | HPLC   | 850TT 01  |

TABLE 1648-1: COMPILED DATA FOR NBS SRM 1648 URBAN PARTICULATE MATTER (revised 3/1/86)

| ELE   | UNITS  | NBS         |     | CONSENSUS   |      | MEDIAN | RANGE        | AA         |     | NAA         |     | ICPES     |             | OTHER METHODS |      |
|-------|--------|-------------|-----|-------------|------|--------|--------------|------------|-----|-------------|-----|-----------|-------------|---------------|------|
|       |        | Mean ± SD   | (n) | Mean ± SD   | (n)  |        |              | Mean ± SD  | (n) | Mean ± SD   | (n) | Mean ± SD | (n)         | Method        |      |
| Ag    | ug/g   | 6           |     | 6.1 ± 0.2   | (5)  | 6.18   | 5.8 - 6.4    | 6.18       | (1) | 6.1 ± 0.3   | (3) | ---       | 6.0         | (1)           | XRF  |
| Al    | %      | 3.42 ± 0.11 |     | 3.22 ± 0.16 | (8)  | 3.12   | 3.05 - 3.5   | 3.18       | (2) | 3.26 ± 0.19 | (4) | 3.18      | ---         | ---           | ---  |
| As    | ug/g   | 115 ± 10    |     | 116 ± 3     | (11) | 117    | 112 - 119    | 114 ± 3    | (3) | 118 ± 1     | (4) | 116 ± 3   | ---         | ---           | ---  |
| B     | ug/g   | ---         |     | 3000 ?      | (2)  | ---    | 158 - 6000   | ---        | --- | ---         | --- | ---       | 158         | (1)           | TCGS |
| Ba    | ug/g   | 737         |     | 780 ± 40    | (5)  | 774    | 740 - 840    | ---        | --- | 793 ± 50    | (3) | 774       | 757         | (1)           | XRF  |
| Be    | ug/g   | ---         |     | 2.6 ± 0.4   | (3)  | 2.5    | 2.3 - 3.0    | ---        | --- | ---         | --- | 2.6 ± 0.4 | ---         | ---           | ---  |
| Br    | ug/g   | 500         |     | 506 ± 25    | (6)  | 504    | 460 - 526    | ---        | --- | 503 ± 27    | (5) | ---       | 517         | (1)           | XRF  |
| C     | %      | ---         |     | 14.98       | (2)  | ---    | 14.7 - 15.27 | ---        | --- | ---         | --- | ---       | 14.7        | (1)           | CB   |
| Ca    | %      | ---         |     | 5.83 ± 0.33 | (8)  | 5.77   | 5.4 - 6.30   | 5.8 ± 0.4  | (3) | 5.8 ± 0.4   | (3) | 5.77      | 6.1         | (1)           | XRF  |
| Cd    | ug/g   | 75 ± 7      |     | 72 ± 2      | (13) | 72     | 69 - 75      | 72 ± 2     | (7) | 70          | (1) | 73 ± 2    | 70          | (1)           | XRF  |
| Ce    | ug/g   | 55          |     | 55 ± 4      | (4)  | 53     | 52 - 61      | ---        | --- | 53 ± 1      | (3) | 61        | ---         | ---           | ---  |
| Cl    | ug/g   | 4500        |     | 4760 ± 230  | (3)  | 4890   | 4500 - 4900  | ---        | --- | 4760 ± 230  | (3) | ---       | ---         | ---           | ---  |
| Co    | ug/g   | 18          |     | 17.4 ± 1.8  | (7)  | 17.6   | 15 - 20      | 15.2       | (1) | 17.6 ± 0.4  | (3) | 18 ± 3    | ---         | ---           | ---  |
| Cr    | ug/g   | 403 ± 12    |     | 397 ± 14    | (9)  | 398    | 380 - 417    | 393 ± 20   | (3) | 407 ± 5     | (3) | 391 ± 10  | 440         | (1)           | XRF  |
| Cs    | ug/g   | 3           |     | 3.5 ± 0.2   | (3)  | 3.4    | 3.3 - 3.73   | ---        | --- | 3.5 ± 0.2   | (3) | ---       | ---         | ---           | ---  |
| Cu    | ug/g   | 609 ± 27    |     | 600 ± 23    | (17) | 596    | 570 - 669    | 591 ± 5    | (9) | 669         | (1) | 630 ± 50  | 640 ± 60    | (3)           | XRF  |
| Eu    | ug/g   | 0.8         |     | 0.85 ± 0.13 | (3)  | 0.79   | 0.77 - 1.0   | ---        | --- | 0.78        | (2) | 1.0       | ---         | ---           | ---  |
| Fe    | %      | 3.91 ± 0.10 |     | 3.92 ± 0.24 | (15) | 3.9    | 3.43 - 4.50  | 3.7 ± 0.5  | (8) | 3.85 ± 0.04 | (4) | 3.9       | 4.00 ± 0.04 | (3)           | XRF  |
| Ga    | ug/g   | ---         |     | 40 ?        | (2)  | ---    | 8.3 - 72     | ---        | --- | 8.3         | (1) | 72        | ---         | ---           | ---  |
| Gd    | ug/g   | ---         |     | 3.4         | (2)  | ---    | 3.1 - 3.7    | ---        | --- | ---         | --- | ---       | 3.4         | (2)           | TCGS |
| H     | %      | ---         |     | 2.23        | (1)  | ---    | ---          | ---        | --- | ---         | --- | ---       | 2.23        | (1)           | CB   |
| Hf    | ug/g   | 4.4         |     | 4.6 ± 0.5   | (3)  | 4.47   | 4.2 - 5.2    | ---        | --- | 4.6 ± 0.5   | (3) | ---       | ---         | ---           | ---  |
| I     | ug/g   | 20          |     | 18 ± 2      | (3)  | 19.2   | 16 - 20      | ---        | --- | 20          | (1) | ---       | 16          | (1)           | XRF  |
| I     | ug/g   | ---         |     | ---         | ---  | ---    | ---          | ---        | --- | ---         | --- | ---       | 19.2        | (1)           | ISE  |
| I-129 | atom/g | ---         |     | 1.65        | (2)  | ---    | 1.5 - 1.8    | ---        | --- | 1.8         | (1) | ---       | ---         | ---           | ---  |
| In    | ng/g   | 1000        |     | 980         | (1)  | ---    | ---          | ---        | --- | 980         | (1) | ---       | ---         | ---           | ---  |
| K     | %      | 1.05 ± 0.01 |     | 1.03 ± 0.05 | (6)  | 1.01   | 0.96 - 1.11  | ---        | --- | 1.03 ± 0.06 | (5) | ---       | 1.04        | (1)           | XRF  |
| La    | ug/g   | 42          |     | 39 ± 3      | (5)  | 40     | 35 - 42      | ---        | --- | 40 ± 2      | (4) | 35        | ---         | ---           | ---  |
| Lu    | ng/g   | ---         |     | 34          | (1)  | ---    | ---          | ---        | --- | 34          | (1) | ---       | ---         | ---           | ---  |
| Mg    | ug/g   | 8000        |     | 7930 ± 650  | (6)  | 7600   | 7200 - 9000  | 7580 ± 330 | (4) | 8300        | (1) | 9000      | ---         | ---           | ---  |
| Mn    | ug/g   | 860         |     | 822 ± 45    | (19) | 830    | 740 - 880    | 816 ± 41   | (8) | 793 ± 55    | (5) | 840       | 865         | (2)           | XRF  |
| Mo    | ug/g   | ---         |     | 18.2 ± 1.9  | (4)  | 17     | 17 - 21      | ---        | --- | 21          | (1) | 18        | 17          | (1)           | XRF  |

TABLE 1648-1: COMPILED DATA FOR NBS SRM 1648 URBAN PARTICULATE MATTER (cont.)

| ELE   | UNITS | NBS        |      | CONSENSUS   |      | MEDIAN | RANGE       | AA         |      | NAA        |     | ICPES      |      | OTHER METHODS |     |      |
|-------|-------|------------|------|-------------|------|--------|-------------|------------|------|------------|-----|------------|------|---------------|-----|------|
|       |       | Mean ± SD  | (n)  | Mean ± SD   | (n)  |        |             | Mean ± SD  | (n)  | Mean ± SD  | (n) | Mean ± SD  | (n)  | Method        |     |      |
| N     | %     | 3.08       | (1)  | 3.25        | (1)  | ---    | ---         | ---        | ---  | ---        | --- | ---        | 3.25 | (1)           | CB  |      |
| NH4-N | %     | 2.01       | ---  | ---         | ---  | ---    | ---         | ---        | ---  | ---        | --- | ---        | ---  | ---           | --- |      |
| NO3-N | %     | 1.07       | ---  | ---         | ---  | ---    | ---         | ---        | ---  | ---        | --- | ---        | ---  | ---           | --- |      |
| Na    | ug/g  | 4250 ± 20  | (4)  | 4230 ± 260  | (4)  | 4100   | 4000 - 4600 | ---        | ---  | 4230 ± 260 | (4) | ---        | ---  | ---           | --- |      |
| Nb    | ug/g  | ---        | (1)  | 22          | (1)  | ---    | ---         | ---        | ---  | ---        | --- | ---        | 22   | (1)           | XRF |      |
| Ni    | ug/g  | 82 ± 3     | (15) | 82 ± 12     | (15) | 79.5   | 62 - 105    | 81 ± 12    | (6)  | 75         | (1) | 74 ± 10    | (4)  | 91            | (2) | XRF  |
| Ni    | ug/g  | ---        | ---  | ---         | ---  | ---    | ---         | ---        | ---  | ---        | --- | ---        | ---  | 84            | (1) | VOLT |
| Pb    | ug/g  | 6550 ± 80  | (17) | 6520 ± 250  | (17) | 6530   | 6100 - 7000 | 6420 ± 180 | (9)  | ---        | --- | 6710 ± 220 | (4)  | 6660 ± 320    | (3) | XRF  |
| Pr    | ug/g  | ---        | (1)  | 8.0         | (1)  | ---    | ---         | ---        | ---  | ---        | --- | 8.0        | (1)  | ---           | --- |      |
| Rb    | ug/g  | 52         | (4)  | 54.5 ± 2.6  | (4)  | 53     | 52 - 58     | ---        | ---  | 54 ± 3     | (4) | ---        | ---  | ---           | --- |      |
| S     | %     | 5.0        | (1)  | 5.21        | (1)  | ---    | ---         | ---        | ---  | ---        | --- | ---        | ---  | ---           | --- |      |
| SO4   | %     | 15.42      | ---  | ---         | ---  | ---    | ---         | ---        | ---  | ---        | --- | ---        | ---  | ---           | --- |      |
| Sb    | ug/g  | 45         | (5)  | 44 ± 2      | (5)  | 44     | 41 - 47     | ---        | ---  | 45 ± 2     | (3) | 41         | (1)  | 44            | (1) | XRF  |
| Sc    | ug/g  | 7          | (4)  | 6.70 ± 0.12 | (4)  | 6.6    | 6.6 - 6.8   | ---        | ---  | 6.7 ± 0.1  | (4) | ---        | ---  | ---           | --- |      |
| Se    | ug/g  | 27 ± 1     | (6)  | 24 ± 2      | (6)  | 24.22  | 20 - 27     | ---        | ---  | 25 ± 2     | (3) | 23         | (2)  | 25            | (1) | XRF  |
| Si    | %     | 12.5       | (6)  | 13.0 ± 1.0  | (6)  | 13.0   | 11.5 - 14.7 | 12.6 ± 0.8 | (4)  | 13         | (1) | ---        | ---  | 14.7          | (1) | XRF  |
| Sm    | ug/g  | 4.4        | (5)  | 4.4 ± 0.3   | (5)  | 4.4    | 4.0 - 4.8   | ---        | ---  | 4.2 ± 0.2  | (3) | ---        | ---  | 4.6           | (2) | TCGS |
| Sn    | ug/g  | ---        | (1)  | 147         | (1)  | ---    | ---         | ---        | ---  | ---        | --- | ---        | ---  | 147           | (1) | XRF  |
| Sr    | ug/g  | ---        | (3)  | 207 ± 15    | (3)  | 211    | 190 - 220   | ---        | ---  | 220        | (1) | ---        | ---  | 200           | (2) | XRF  |
| Ta    | ug/g  | ---        | (2)  | 6.98        | (2)  | ---    | 6.76 - 7.2  | ---        | ---  | 6.98       | (2) | ---        | ---  | ---           | --- |      |
| Th    | ug/g  | 7.4        | (3)  | 7.6 ± 0.2   | (3)  | 7.5    | 7.4 - 7.8   | ---        | ---  | 7.6 ± 0.2  | (3) | ---        | ---  | ---           | --- |      |
| Ti    | ug/g  | 4000       | (9)  | 4070 ± 200  | (9)  | 4000   | 3800 - 4500 | 4030 ± 120 | (3)  | 4000 ± 500 | (4) | 4000       | (1)  | 4030          | (2) | XRF  |
| U     | ug/g  | 5.5 ± 0.1  | (4)  | 5.5 ± 0.3   | (4)  | 5.42   | 5.2 - 5.9   | ---        | ---  | 5.5 ± 0.3  | (4) | ---        | ---  | ---           | --- |      |
| V     | ug/g  | 140 ± 3    | (8)  | 121 ± 8     | (8)  | 119    | 106 - 130   | ---        | ---  | 122 ± 6    | (5) | 118 ± 12   | (3)  | ---           | --- |      |
| W     | ug/g  | 4.8        | (3)  | 4.2 ± 0.7   | (3)  | 4.4    | 3.5 - 4.8   | ---        | ---  | 4.2 ± 0.7  | (3) | ---        | ---  | ---           | --- |      |
| Y     | ug/g  | ---        | (1)  | 5.0         | (1)  | ---    | ---         | ---        | ---  | ---        | --- | 5.0        | (1)  | ---           | --- |      |
| Yb    | ug/g  | ---        | (1)  | 2.0         | (1)  | ---    | ---         | ---        | ---  | ---        | --- | 2.0        | (1)  | ---           | --- |      |
| Zn    | ug/g  | 4760 ± 140 | (21) | 4740 ± 70   | (21) | 4740   | 4580 - 4890 | 4720 ± 70  | (10) | 4760 ± 60  | (4) | 4720 ± 40  | (4)  | 4780 ± 120    | (3) | XRF  |
| Zr    | ug/g  | ---        | (1)  | 169         | (1)  | ---    | ---         | ---        | ---  | ---        | --- | ---        | ---  | 169           | (1) | XRF  |

TABLE 1648-1: COMPILED DATA FOR NBS SRM 1648 URBAN PARTICULATE MATTER (cont.)

| COMPOUND               | CAS #  | UNITS | NBS | CONSENSUS<br>Mean $\pm$ SD (n) | MEDIAN | RANGE     | METHOD MEANS |          |
|------------------------|--------|-------|-----|--------------------------------|--------|-----------|--------------|----------|
|                        |        |       |     |                                |        |           | Mean (n)     | Method   |
| Anthracene             | 120127 | ng/g  | --- | 335 (2)                        | ---    | 310 - 360 | 310 (1)      | GC-MS LC |
| 1,2-Benzanthracene     | 56553  | ug/g  | --- | 2.9 $\pm$ 0.3 (3)              | 2.8    | 2.7 - 3.2 | 3.0 (2)      | LC GC-MS |
| Benzo(g,h,i)perylene   | 191242 | ug/g  | --- | 6.15 (2)                       | ---    | 5.5 - 6.8 | 6.8 (1)      | GC-MS LC |
| Benzo-a-pyrene         | 50328  | ug/g  | --- | 3.1 $\pm$ 0.4 (3)              | 3.3    | 2.6 - 3.4 | 3.0 (2)      | LC GC-MS |
| Benzo-e-pyrene         | 192972 | ug/g  | --- | 6.8 (1)                        | ---    | ---       | 6.8 (1)      | GC-MS    |
| Benzo-k-fluoranthene   | 207089 | ug/g  | --- | 3.35 (2)                       | ---    | 3.3 - 3.4 | 3.35 (2)     | LC       |
| Chrysene               | 218019 | ug/g  | --- | 6.6 (2)                        | ---    | 6.6 - 6.6 | 6.6 (2)      | LC       |
| Fluoranthene           | 206440 | ug/g  | --- | 8.0 $\pm$ 0.6 (3)              | 7.9    | 7.4 - 8.7 | 8.3 (2)      | LC GC-MS |
| Indeno(1,2,3-cd)pyrene | 193395 | ug/g  | --- | 4.7 $\pm$ 0.1 (3)              | 4.7    | 4.6 - 4.8 | 4.75 (2)     | LC GC-MS |
| Perylene               | 198550 | ng/g  | --- | 620 $\pm$ 90 (3)               | 650    | 520 - 690 | 670 (2)      | LC GC-MS |
| Phenanthrene           | 85018  | ug/g  | --- | 4.7 (2)                        | ---    | 4.6 - 4.8 | 4.8 (1)      | GC-MS LC |
| Pyrene                 | 129000 | ug/g  | --- | 6.8 $\pm$ 0.6 (3)              | 6.8    | 6.1 - 7.4 | 6.1 (1)      | GC-MS LC |

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (revised 3/1/86)

| Conc                                 | Uncer | Com | Method | Reference | Conc                       | Uncer | Com | Method | Reference |
|--------------------------------------|-------|-----|--------|-----------|----------------------------|-------|-----|--------|-----------|
| <u>Anthracene (ng/g)</u>             |       |     |        |           | <u>Phenanthrene (ug/g)</u> |       |     |        |           |
| 310                                  |       |     | GC-MS  | 84SIM 03  | 4.6                        | 0.3   |     | LC     | 84MAY 01  |
| 360                                  | 10    |     | LC     | 84MAY 01  | 4.8                        |       |     | GC-MS  | 84SIM 03  |
| <u>1,2-Benzanthracene (ug/g)</u>     |       |     |        |           | <u>Pyrene (ug/g)</u>       |       |     |        |           |
| 2.7                                  |       |     | GC-MS  | 84SIM 03  | 6.1                        |       |     | GC-MS  | 84SIM 03  |
| 2.8                                  | 0.1   | 44  | LC     | 84MAY 01  | 6.8                        | 0.2   | 44  | LC     | 84MAY 01  |
| 3.2                                  | 0.1   | 44  | LC     | 84MAY 01  | 7.4                        | 0.2   | 44  | LC     | 84MAY 01  |
| <u>Benzo(g,h,i)perylene (ug/g)</u>   |       |     |        |           | <u>Ag (ug/g)</u>           |       |     |        |           |
| 5.5                                  | 0.8   |     | LC     | 84MAY 01  | 5.8                        | 0.9   |     | IENA   | 84GLA 07  |
| 6.8                                  |       |     | GC-MS  | 84SIM 03  | 6                          | 1     | D   | XRF    | 79GIA 03  |
| <u>Benzo-a-pyrene (ug/g)</u>         |       |     |        |           | 6                          | 1     |     | XRF    | 77GIA 02  |
| 2.6                                  | 0.2   | 44  | LC     | 84MAY 01  | 6.18                       |       |     | FAA    | 83BLO 01  |
| 3.3                                  |       |     | GC-MS  | 84SIM 03  | 6.2                        |       |     | NAA    | 83BLO 01  |
| 3.4                                  | 0.2   | 44  | LC     | 84MAY 01  | 6.4                        | 0.5   |     | ITNA   | 79GRE 01  |
| <u>Benzo-e-pyrene (ug/g)</u>         |       |     |        |           | <u>Al (%)</u>              |       |     |        |           |
| 6.8                                  |       |     | GC-MS  | 84SIM 03  | 3.05                       | 0.03  |     | AA     | 81FRA 01  |
| <u>Benzo-k-fluoranthene (ug/g)</u>   |       |     |        |           | 3.05                       | 0.17  |     | ICPES  | 84JEN 02  |
| 3.3                                  | 0.1   | 44  | LC     | 84MAY 01  | 3.1                        | 0.1   |     | ITNA   | 84GLA 07  |
| 3.4                                  | 0.05  | 44  | LC     | 84MAY 01  | 3.12                       | 0.2   | 35  | ITNA   | 81GLA 03  |
| <u>Chrysene (ug/g)</u>               |       |     |        |           | 3.3                        |       |     | ICPES  | 80FLO 01  |
| 6.6                                  | 0.1   | 44  | LC     | 84MAY 01  | 3.3                        |       |     | ITNA   | 84TU 03   |
| 6.6                                  | 0.2   | 44  | LC     | 84MAY 01  | 3.3                        | 0.45  |     | AA     | 81FAR 01  |
| <u>Fluoranthene (ug/g)</u>           |       |     |        |           | 3.5                        | 0.1   |     | ITNA   | 79GRE 01  |
| 7.4                                  |       |     | GC-MS  | 84SIM 03  | <u>As (ug/g)</u>           |       |     |        |           |
| 7.9                                  | 0.6   | 44  | LC     | 84MAY 01  | 104                        | 10    |     | ICPES  | 84JEN 02  |
| 8.7                                  | 0.4   | 44  | LC     | 84MAY 01  | 112                        |       |     | ICPES  | 80FLO 01  |
| <u>Indeno(1,2,3-cd)pyrene (ug/g)</u> |       |     |        |           | 112                        | 2     |     | AA     | 83BYR 01  |
| 4.6                                  |       |     | GC-MS  | 84SIM 03  | 113                        | 12    |     | FAA    | 83LOV 01  |
| 4.7                                  | 0.2   | 44  | LC     | 84MAY 01  | 117                        |       |     | ICPES  | 82NYG 01  |
| 4.8                                  | 0.2   | 44  | LC     | 84MAY 01  | 117                        |       |     | HAA    | 84YAM 01  |
| <u>Perylene (ng/g)</u>               |       |     |        |           | 117                        | 5     |     | ITNA   | 79GRE 01  |
| 520                                  |       |     | GC-MS  | 84SIM 03  | 117                        | 5     |     | ITNA   | 84GLA 07  |
| 650                                  | 20    | 44  | LC     | 84MAY 01  | 117                        | 6     | 11  | ICPES  | 84SCH 03  |
| 690                                  | 20    | 44  | LC     | 84MAY 01  | 119                        |       | 35  | NAA    | 81GLA 03  |
|                                      |       |     |        |           | 119                        | 2     |     | IENA   | 84GLA 07  |
|                                      |       |     |        |           | 119                        | 2     | 11  | ICPES  | 84SCH 03  |
|                                      |       |     |        |           | <u>B (ug/g)</u>            |       |     |        |           |
|                                      |       |     |        |           | 158                        | 15    |     | TCGS   | 84GLA 01  |
|                                      |       |     |        |           | 6000                       | 170   |     | UU     | 81FRA 01  |

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                   | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------------|-------|-----|--------|-----------|
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Cd (ug/g) cont.</u> |       |     |        |           |
| 740              | 60    |     | ITNA   | 79GRE 01  | 72                     |       | 11  | AA     | 82YAM 01  |
| 757              | 35    | D   | XRF    | 79GIA 03  | 72                     | 1     | 11  | ICPES  | 84SCH 03  |
| 757              | 35    |     | XRF    | 77GIA 02  | 73                     |       |     | ICPES  | 80FLO 01  |
| 774              |       |     | ICPES  | 80FLO 01  | 74                     | 2     |     | AA     | 83BYR 01  |
| 800              | 10    | 5   | ITNA   | 84GLA 07  | 75                     | 7     |     | AA     | 84GLA 07  |
| 840              | 40    |     | IENA   | 84GLA 07  | 75                     | 8     |     | ICPES  | 84JEN 02  |
| 980              | 100   | 5   | ITNA   | 84GLA 07  | 105                    | 9     |     | AA     | 81FRA 01  |
| <u>Be (ug/g)</u> |       |     |        |           | <u>Ce (ug/g)</u>       |       |     |        |           |
| 2.3              | 0.2   | 11  | ICPES  | 84SCH 03  | 52                     | 5     |     | IENA   | 84GLA 07  |
| 2.5              | 0.2   | 11  | ICPES  | 84SCH 03  | 53                     | 2     |     | ITNA   | 84GLA 07  |
| 3                |       |     | ICPES  | 80FLO 01  | 54                     | 3     |     | ITNA   | 79GRE 01  |
|                  |       |     |        |           | 61                     |       |     | ICPES  | 80FLO 01  |
| <u>Br (ug/g)</u> |       |     |        |           | <u>Cl (ug/g)</u>       |       |     |        |           |
| 460              | 15    | 5   | IENA   | 84GLA 07  | 500                    | 60    | 35  | ITNA   | 81GLA 03  |
| 500              | 30    |     | ITNA   | 79GRE 01  | 4500                   | 200   |     | ITNA   | 79GRE 01  |
| 504              | 14    | 5   | IENA   | 84GLA 07  | 4890                   | 80    |     | ITNA   | 84GLA 07  |
| 517              | 14    | D   | XRF    | 79GIA 03  | 4900                   |       |     | ITNA   | 84TU 03   |
| 517              | 14    |     | XRF    | 77GIA 02  |                        |       |     |        |           |
| 526              | 24    | 35  | ITNA   | 81GLA 03  |                        |       |     |        |           |
| 526              | 25    |     | ITNA   | 84GLA 07  |                        |       |     |        |           |
| <u>C (%)</u>     |       |     |        |           | <u>Co (ug/g)</u>       |       |     |        |           |
| 14.7             | 0.3   |     | CB     | 84GLA 07  | 15                     | 3     |     | ICPES  | 84JEN 02  |
| 15.27            | 0.15  |     | UU     | 81FRA 01  | 15.2                   | 0.9   |     | AA     | 81FRA 01  |
|                  |       |     |        |           | 17.2                   | 0.6   |     | ITNA   | 84GLA 07  |
|                  |       |     |        |           | 17.6                   | 0.5   |     | ITNA   | 79GRE 01  |
|                  |       |     |        |           | 18                     | 1     |     | IENA   | 84GLA 07  |
|                  |       |     |        |           | 19                     | 2     | 11  | ICPES  | 84SCH 03  |
|                  |       |     |        |           | 20                     | 3     | 11  | ICPES  | 84SCH 03  |
|                  |       |     |        |           | 28                     |       |     | ICPES  | 80FLO 01  |
|                  |       |     |        |           | 42                     | 7     | 35  | ITNA   | 81GLA 03  |
| <u>Ca (%)</u>    |       |     |        |           | <u>Cr (ug/g)</u>       |       |     |        |           |
| 5.4              | 0.3   |     | IENA   | 84GLA 07  | 173                    | 27    |     | FAA    | 81FAR 01  |
| 5.5              | 0.4   |     | AA     | 82GLA 02  | 380                    | 21    |     | ICPES  | 84JEN 02  |
| 5.6              | 0.4   |     | AA     | 84GLA 07  | 380                    | 40    |     | AA     | 84GLA 07  |
| 5.77             | 0.38  |     | ICPES  | 84JEN 02  | 383                    |       |     | AA     | 82GLA 02  |
| 5.8              | 0.5   |     | ITNA   | 79GRE 01  | 396                    | 6     | 11  | ICPES  | 84SCH 03  |
| 6.1              | 0.04  |     | EXRF   | 78PEL 01  | 398                    |       |     | ICPES  | 80FLO 01  |
| 6.18             | 0.23  |     | AA     | 81FAR 01  | 402                    | 10    |     | ITNA   | 79GRE 01  |
| 6.3              | 0.3   |     | ITNA   | 84GLA 07  | 410                    | 8     |     | ITNA   | 84GLA 07  |
| <u>Cd (ug/g)</u> |       |     |        |           | 410                    | 50    | 35  | ITNA   | 81GLA 03  |
| 64               | 7     |     | AA     | 82GLA 02  | 417                    | 16    |     | AA     | 81FRA 01  |
| 69               | 4     |     | FAA    | 81FAR 01  | 440                    | 10    |     | EXRF   | 78PEL 01  |
| 70               | 2     |     | XRF    | 77GIA 02  | 560                    | 11    |     | UU     | 81FRA 01  |
| 70               | 2     | D   | XRF    | 79GIA 03  | 580                    | 50    |     | UU     | 81FRA 01  |
| 70               | 6     |     | ITNA   | 79GRE 01  |                        |       |     |        |           |
| 71               | 2     | 11  | ICPES  | 84SCH 03  |                        |       |     |        |           |
| 72               |       | 11  | AA     | 82YAM 01  |                        |       |     |        |           |
| 72               |       | 11  | AA     | 82YAM 01  |                        |       |     |        |           |
| 72               |       | 11  | AA     | 82YAM 01  |                        |       |     |        |           |

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Cs (ug/g)</u> |       |     |        |           | <u>Ga (ug/g)</u>      |       |     |        |           |
| 3.3              | 0.2   |     | IENA   | 84GLA 07  | 8.3                   | 0.4   |     | IENA   | 84GLA 07  |
| 3.4              | 0.2   |     | ITNA   | 79GRE 01  | 72                    |       |     | ICPES  | 80FLO 01  |
| 3.73             | 0.29  |     | ITNA   | 84GLA 07  | <u>Gd (ug/g)</u>      |       |     |        |           |
| <u>Cu (ug/g)</u> |       |     |        |           | 3.1                   | 0.6   | 4   | TCGS   | 85GLA 05  |
| 570              | 44    |     | UU     | 81FRA 01  | 3.7                   | 0.4   | 4   | TCGS   | 85GLA 05  |
| 581              | 16    |     | XRF    | 77GIA 02  | <u>H (%)</u>          |       |     |        |           |
| 585              |       | 11  | AA     | 82YAM 01  | 2.23                  | 0.04  |     | CB     | 84GLA 07  |
| 586              | 11    |     | AA     | 83BYR 01  | <u>Hf (ug/g)</u>      |       |     |        |           |
| 586              | 22    |     | FAA    | 81FAR 01  | 4.2                   | 0.3   |     | ITNA   | 79GRE 01  |
| 589              | 12    |     | AA     | 81FRA 01  | 4.47                  | 0.07  |     | ITNA   | 84GLA 07  |
| 590              |       | 11  | AA     | 82YAM 01  | 5.2                   | 0.4   |     | IENA   | 84GLA 07  |
| 590              |       | 11  | AA     | 82YAM 01  | <u>I (ug/g)</u>       |       |     |        |           |
| 595              |       | 11  | AA     | 82YAM 01  | 16                    | 2     |     | XRF    | 77GIA 02  |
| 596              | 24    |     | AA     | 82GLA 02  | 16                    | 2     | D   | XRF    | 79GIA 01  |
| 598              |       |     | ICPES  | 80FLO 01  | 19.2                  | 0.3   |     | ISE    | 85COE 01  |
| 600              | 30    |     | AA     | 84GLA 07  | 20                    | 5     |     | ITNA   | 79GRE 01  |
| 603              | 7     | 11  | ICPES  | 84SCH 03  | <u>I-129 (ATOM/G)</u> |       |     |        |           |
| 609              | 29    | 11  | ICPES  | 84SCH 03  | 1.5                   |       | 38  | UU     | 83BPN 01  |
| 610              | 18    |     | UU     | 81FRA 01  | 1.8                   | 0.6   | 38  | RTNA   | 83LUT 01  |
| 640              | 60    |     | EXRF   | 81KIN 01  | <u>In (ng/g)</u>      |       |     |        |           |
| 669              |       |     | ITNA   | 84TU 03   | 980                   | 70    |     | ITNA   | 79GRE 01  |
| 695              | 35    |     | ICPES  | 84JEN 02  | <u>K (%)</u>          |       |     |        |           |
| 700              | 100   |     | EXRF   | 78PEL 01  | 0.96                  | 0.12  |     | ITNA   | 84GLA 07  |
| <u>Eu (ug/g)</u> |       |     |        |           | 0.99                  | 0.11  |     | ITNA   | 79GRE 01  |
| 0.77             | 0.03  |     | ITNA   | 84GLA 07  | 1.01                  |       |     | ITNA   | 84TU 03   |
| 0.79             | 0.08  |     | ITNA   | 79GRE 01  | 1.04                  | 0.02  |     | EXRF   | 78PEL 01  |
| 1                |       |     | ICPES  | 80FLO 01  | 1.07                  | 0.02  |     | IENA   | 84GLA 07  |
| <u>Fe (%)</u>    |       |     |        |           | 1.11                  | 0.08  | 35  | ITNA   | 81GLA 03  |
| 3.0              |       | 11  | AA     | 82YAM 01  | <u>La (ug/g)</u>      |       |     |        |           |
| 3.05             |       | 11  | AA     | 82YAM 01  | 35                    |       |     | ICPES  | 80FLO 01  |
| 3.43             | 0.05  |     | AA     | 81FRA 01  | 38                    | 3     | 35  | ITNA   | 81GLA 01  |
| 3.7              |       |     | AA     | 82GLA 02  | 40                    | 2     |     | ITNA   | 84GLA 01  |
| 3.7              | 0.25  |     | ICPES  | 84JEN 02  | 42                    | 2     |     | ITNA   | 79GRE 01  |
| 3.8              | 0.5   | 35  | ITNA   | 81GLA 03  | 42                    | 5     |     | IENA   | 84GLA 07  |
| 3.84             | 0.08  |     | ITNA   | 79GRE 01  | <u>La (ug/g)</u>      |       |     |        |           |
| 3.86             | 0.06  |     | ITNA   | 84GLA 07  | 35                    |       |     | ICPES  | 80FLO 01  |
| 3.9              |       | 11  | AA     | 82YAM 01  | 38                    | 3     | 35  | ITNA   | 81GLA 01  |
| 3.9              |       | 11  | AA     | 82YAM 01  | 40                    | 2     |     | ITNA   | 84GLA 01  |
| 3.9              | 0.1   |     | IENA   | 84GLA 07  | 42                    | 2     |     | ITNA   | 79GRE 01  |
| 3.96             | 0.037 |     | EXRF   | 78PEL 01  | 42                    | 5     |     | IENA   | 84GLA 07  |
| 4.0              | 0.1   |     | EXRF   | 81KIN 01  | <u>La (ug/g)</u>      |       |     |        |           |
| 4.05             | 0.1   |     | XRF    | 77GIA 02  | 35                    |       |     | ICPES  | 80FLO 01  |
| 4.05             | 0.1   | D   | XRF    | 79GIA 03  | 38                    | 3     | 35  | ITNA   | 81GLA 01  |
| 4.1              |       |     | ICPES  | 80FLO 01  | 40                    | 2     |     | ITNA   | 84GLA 01  |
| 4.2              | 0.4   |     | AA     | 84GLA 07  | 42                    | 2     |     | ITNA   | 79GRE 01  |
| 4.5              | 0.23  |     | AA     | 81FAR 01  | 42                    | 5     |     | IENA   | 84GLA 07  |
| 5.45             | 0.32  |     | UU     | 81FRA 01  | <u>La (ug/g)</u>      |       |     |        |           |
| 5.65             | 0.14  |     | UU     | 81FRA 01  | 35                    |       |     | ICPES  | 80FLO 01  |

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Lu (ng/g)</u> |       |     |        |           | <u>Nb (ug/g)</u> |       |     |        |           |
| 34               | 3     |     | ITNA   | 84GLA 07  | 22               | 3     |     | XRF    | 77GIA 02  |
| <u>Mg (ug/g)</u> |       |     |        |           | <u>Ni (ug/g)</u> |       |     |        |           |
| 5500             |       |     | ITNA   | 84TU 03   | 62               | 6     | 11  | ICPES  | 84SCH 03  |
| 7200             | 600   |     | AA     | 82GLA 02  | 72               | 15    |     | AA     | 82GLA 02  |
| 7500             | 400   |     | AA     | 84GLA 07  | 74               | 5     |     | ICPES  | 84JEN 02  |
| 7600             | 400   |     | AA     | 81FAR 01  | 74.2             |       | 11  | AA     | 82YAM 01  |
| 8000             | 130   |     | AA     | 81FRA 01  | 75               |       | 11  | AA     | 82YAM 01  |
| 8300             | 800   |     | ITNA   | 79GRE 01  | 75               | 4     |     | IENA   | 84GLA 07  |
| 9000             |       |     | ICPES  | 80FLO 01  | 77               | 1     | 11  | ICPES  | 84SCH 03  |
| <u>Mn (ug/g)</u> |       |     |        |           | <u>Pb (ug/g)</u> |       |     |        |           |
| 740              | 30    |     | IENA   | 84GLA 07  | 79.5             |       | 11  | AA     | 82YAM 01  |
| 747              | 10    |     | ITNA   | 84GLA 07  | 80.5             |       | 11  | AA     | 82YAM 01  |
| 770              |       | 11  | AA     | 82YAM 01  | 83               | 4     |     | EXRF   | 78PEL 01  |
| 770              |       | 11  | AA     | 82YAM 01  | 84               |       |     | VOLT   | 84BRA 01  |
| 790              | 20    |     | ITNA   | 79GRE 01  | 85               |       |     | ICPES  | 80FLO 01  |
| 790              | 80    |     | AA     | 84GLA 07  | 99               | 13    |     | XRF    | 77GIA 02  |
| 805              | 4     |     | AA     | 81FRA 01  | 100              | 7     |     | UU     | 81FRA 01  |
| 810              | 40    | 35  | ITNA   | 81GLA 03  | 105              | 21    |     | AA     | 81FRA 01  |
| 810              | 60    |     | AA     | 81FAR 01  | <u>Pb (ug/g)</u> |       |     |        |           |
| 830              | 40    |     | ICPES  | 84JEN 02  | 6100             | 200   |     | AA     | 82GLA 02  |
| 840              | 85    |     | UU     | 81FRA 01  | 6200             | 810   |     | UU     | 81FRA 01  |
| 850              |       | 11  | AA     | 82YAM 01  | 6210             | 85    |     | FAA    | 81FAR 01  |
| 851              |       |     | ICPES  | 80FLO 01  | 6300             | 100   |     | XRF    | 77GIA 02  |
| 852              |       | 11  | AA     | 82YAM 01  | 6300             | 300   |     | AA     | 84GLA 07  |
| 860              | 20    |     | EXRF   | 81KIN 01  | 6400             | 45    |     | AA     | 81FRA 01  |
| 870              | 30    |     | EXRF   | 78PEL 01  | 6510             |       | 11  | AA     | 82YAM 01  |
| 877              |       |     | ITNA   | 84TU 03   | 6530             | 120   | 11  | ICPES  | 84SCH 03  |
| 880              | 19    |     | UU     | 81FRA 01  | 6550             |       | 11  | AA     | 82YAM 01  |
| 880              | 80    |     | AA     | 82GLA 02  | 6550             | 190   | 11  | ICPES  | 84SCH 03  |
| 961              | 34    |     | XRF    | 77GIA 02  | 6560             | 100   |     | AA     | 83BYR 01  |
| 961              | 34    | D   | XRF    | 79GIA 03  | 6630             |       | 11  | AA     | 82YAM 01  |
| <u>Mo (ug/g)</u> |       |     |        |           | <u>Pr (ug/g)</u> |       |     |        |           |
| 17               | 2     |     | XRF    | 77GIA 02  | 6760             | 70    |     | ICPES  | 84JEN 02  |
| 17               | 2     | 11  | ICPES  | 84SCH 03  | 6780             | 60    |     | EXRF   | 78PEL 01  |
| 18               | 1     | 11  | ICPES  | 84SCH 03  | 6900             | 200   |     | EXRF   | 81KIN 01  |
| 21               | 2     |     | IENA   | 84GLA 07  | 7000             |       |     | ICPES  | 80FLO 01  |
| <u>N (%)</u>     |       |     |        |           | <u>Rb (ug/g)</u> |       |     |        |           |
| 3.25             | 0.04  |     | CB     | 84GLA 07  | 8                |       |     | ICPES  | 80FLO 01  |
| <u>Na (ug/g)</u> |       |     |        |           | <u>Rb (ug/g)</u> |       |     |        |           |
| 4000             | 200   |     | ITNA   | 79GRE 01  | 52               | 9     |     | ITNA   | 79GRE 01  |
| 4100             |       |     | ITNA   | 84TU 03   | 53               | 5     |     | ITNA   | 84GLA 07  |
| 4220             | 120   | 5   | ITNA   | 84GLA 07  | 55               | 6     | 35  | ITNA   | 81GLA 03  |
| 4600             | 200   | 5   | ITNA   | 84GLA 07  | 58               | 2     |     | IENA   | 84GLA 07  |
| 5500             | 1500  | 35  | ITNA   | 81GLA 03  |                  |       |     |        |           |

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (cont.)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>S (%)</u>     |       |     |        |           | <u>Sr (ug/g)</u> |       |     |        |           |
| 5.21             | 0.06  |     | UU     | 81FRA 01  | 190              | 10    |     | EXRF   | 78PEL 01  |
|                  |       |     |        |           | 211              | 6     |     | XRF    | 77GIA 02  |
| <u>Sb (ug/g)</u> |       |     |        |           | 220              | 10    |     | IENA   | 84GLA 07  |
| 41               |       |     | ICPES  | 82NYG 01  | 450              |       |     | ICPES  | 80FLO 01  |
| 44               | 3     |     | XRF    | 77GIA 02  | <u>Ta (ug/g)</u> |       |     |        |           |
| 44               | 3     | D   | XRF    | 79GIA 03  | 6.76             | 0.17  |     | ITNA   | 84GLA 07  |
| 44               | 6     |     | ITNA   | 84GLA 02  | 7.2              | 0.4   |     | IENA   | 84GLA 07  |
| 45               | 3     |     | ITNA   | 79GRE 01  | <u>Th (ug/g)</u> |       |     |        |           |
| 47               | 2     |     | ITNA   | 84GLA 07  | 7.4              | 0.3   |     | ITNA   | 79GRE 01  |
| <u>Sc (ug/g)</u> |       |     |        |           | 7.5              | 0.5   |     | ITNA   | 84GLA 07  |
| 6.6              | 0.2   |     | ITNA   | 79GRE 01  | 7.8              | 0.4   |     | IENA   | 84GLA 07  |
| 6.6              | 0.6   |     | ITNA   | 84GLA 02  | <u>Ti (ug/g)</u> |       |     |        |           |
| 6.8              |       | 35  | ITNA   | 81GLA 03  | 3300             |       |     | ITNA   | 84TU 03   |
| 6.8              | 0.3   |     | ITNA   | 84GLA 07  | 3800             | 200   |     | EXRF   | 81KIN 01  |
| <u>Se (ug/g)</u> |       |     |        |           | 3900             | 800   |     | AA     | 81FRA 01  |
| 4                |       |     | ICPES  | 80FLO 01  | 4000             |       |     | ICPES  | 80FLO 01  |
| 20               | 6     |     | ICPES  | 84JEN 02  | 4000             | 200   |     | ITNA   | 79GRE 01  |
| 23.1             | 0.2   | 35  | RTNA   | 81GLA 01  | 4000             | 200   |     | ITNA   | 84GLA 07  |
| 24.22            | 0.25  |     | RTNA   | 84DEL 01  | 4100             | 300   |     | AA     | 84GLA 07  |
| 25               | 4     |     | XRF    | 77GIA 02  | 4100             | 400   |     | AA     | 82GLA 02  |
| 25               | 4     | D   | XRF    | 79GIA 03  | 4260             | 30    |     | EXRF   | 78PEL 01  |
| 26               |       |     | ICPES  | 82NYG 01  | 4500             | 400   |     | IENA   | 84GLA 07  |
| 27               | 2     |     | ITNA   | 79GRE 01  | 9700             |       | 35  | NAA    | 81GLA 03  |
| <u>Si (%)</u>    |       |     |        |           | <u>U (ug/g)</u>  |       |     |        |           |
| 11.5             | 2     |     | AA     | 82GLA 02  | 5.2              | 0.6   |     | DNA    | 85GAU 04  |
| 12.63            | 0.47  |     | AA     | 81FRA 01  | 5.42             | 0.2   |     | DNA    | 84GLA 07  |
| 13               | 1.1   |     | IENA   | 84GLA 07  | 5.6              | 0.05  |     | IENA   | 84GLA 07  |
| 13               | 2     |     | AA     | 84GLA 07  | 5.9              |       |     | DNA    | 84GLA 02  |
| 13.3             | 1.1   |     | AA     | 83FAR 01  | <u>V (ug/g)</u>  |       |     |        |           |
| 14.7             | 0.3   |     | EXRF   | 78PEL 01  | 106              |       |     | ICPES  | 80FLO 01  |
| <u>Sm (ug/g)</u> |       |     |        |           | 116              | 4     |     | ITNA   | 84GLA 07  |
| 4                | 0.4   |     | ITNA   | 79GRE 01  | 116              | 19    | 35  | ITNA   | 81GLA 03  |
| 4.2              | 0.4   | 35  | ITNA   | 81GLA 03  | 119              | 9     | 11  | ICPES  | 84SCH 03  |
| 4.4              | 0.3   |     | ITNA   | 84GLA 07  | 123              | 12    |     | IENA   | 84GLA 07  |
| 4.4              | 0.4   | 4   | TCGS   | 85GLA 05  | 127              |       |     | ITNA   | 84TU 03   |
| 4.8              | 0.4   | 4   | TCGS   | 85GLA 05  | 130              | 2     | 11  | ICPES  | 84SCH 03  |
| <u>Sn (ug/g)</u> |       |     |        |           | 130              | 7     |     | ITNA   | 79GRE 01  |
| 147              | 4     |     | XRF    | 77GIA 02  |                  |       |     |        |           |

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (cont.)

| Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|
| <u>W (ug/g)</u>  |       |     |        |           |
| 3.5              |       | 35  | RENA   | 81GLA 03  |
| 4.4              | 2.8   |     | IENA   | 84GLA 07  |
| 4.8              | 0.6   |     | ITNA   | 79GRE 01  |
| <u>Y (ug/g)</u>  |       |     |        |           |
| 5                |       |     | ICPES  | 80FLO 01  |
| <u>Yb (ug/g)</u> |       |     |        |           |
| 2                |       |     | ICPES  | 80FLO 01  |
| <u>Zn (ug/g)</u> |       |     |        |           |
| 4300             | 550   |     | UU     | 81FRA 01  |
| 4400             | 60    |     | UU     | 81FRA 01  |
| 4580             | 160   |     | AA     | 81FAR 01  |
| 4650             |       | 11  | AA     | 82YAM 01  |
| 4650             | 150   |     | EXRF   | 78PEL 01  |
| 4670             | 35    |     | ICPES  | 84JEN 02  |
| 4670             | 70    |     | AA     | 83BYR 01  |
| 4700             |       | 11  | AA     | 82YAM 01  |
| 4700             |       | 11  | AA     | 82YAM 01  |
| 4700             |       |     | ICPES  | 80FLO 01  |
| 4700             | 200   |     | ITNA   | 79GRE 01  |
| 4740             | 30    |     | AA     | 80EPS 01  |
| 4740             | 130   |     | IENA   | 84GLA 07  |
| 4750             |       | 11  | AA     | 82YAM 01  |
| 4750             | 50    |     | ITNA   | 84GLA 07  |
| 4760             | 70    | 11  | ICPES  | 84SCH 03  |
| 4760             | 110   | 11  | ICPES  | 84SCH 03  |
| 4800             |       |     | AA     | 82GLA 02  |
| 4800             | 60    |     | AA     | 81FRA 01  |
| 4800             | 100   |     | EXRF   | 81KIN 01  |
| 4800             | 300   |     | AA     | 84GLA 07  |
| 4850             | 240   | 35  | ITNA   | 81GLA 03  |
| 4890             | 130   | D   | XRF    | 79GIA 03  |
| 4890             | 130   |     | XRF    | 77GIA 02  |
| <u>Zr (ug/g)</u> |       |     |        |           |
| 169              | 8     |     | XRF    | 77GIA 02  |

TABLE 1649-1: COMPILED DATA FOR NBS SRM 1649 URBAN DUST/ ORGANICS (revised 3/1/86)

| COMPOUND               | CAS #  | UNITS | NBS       |             | CONSENSUS |     | MEDIAN    | RANGE       | METHOD MEANS |       |
|------------------------|--------|-------|-----------|-------------|-----------|-----|-----------|-------------|--------------|-------|
|                        |        |       | Mean ± SD | (n)         | Mean ± SD | (n) |           |             | Mean ± SD    | (n)   |
| Anthracene             | 120127 | ng/g  | ---       | 500         | (1)       | --- | ---       | 500         | (1)          | GC-MS |
| Benz[a]anthracene      | 56553  | ug/g  | 2.6 ± 0.3 | 2.7 ± 0.3   | (6)       | 2.7 | 2.4 - 3.3 | 2.63 ± 0.21 | (3)          | LC    |
|                        | 56553  | ug/g  | ---       | ---         | ---       | --- | ---       | 3.05        | (2)          | GC-MS |
|                        | 56553  | ug/g  | ---       | ---         | ---       | --- | ---       | 2.4         | (1)          | GC    |
| Benzo[b]fluoranthene   | 205992 | ug/g  | 6.2       | 6.1         | (2)       | --- | 6.0 - 6.2 | 6.1         | (2)          | LC    |
| Benzo[k]fluoranthene   | 207089 | ug/g  | 2         | 2.03 ± 0.06 | (3)       | 2.0 | 2.0 - 2.1 | 2.03 ± 0.06 | (3)          | LC    |
| Benzo[ghi]perylene     | 191242 | ug/g  | 4.5 ± 1.1 | 4.6 ± 0.5   | (6)       | 4.4 | 3.9 - 5.2 | 4.7         | (1)          | GC    |
|                        | 191242 | ug/g  | ---       | ---         | ---       | --- | ---       | 4.7         | (2)          | GC-MS |
|                        | 191242 | ug/g  | ---       | ---         | ---       | --- | ---       | 4.4 ± 0.7   | (3)          | LC    |
| Benzo[a]pyrene         | 50328  | ug/g  | 2.9 ± 0.5 | 2.6 ± 0.3   | (6)       | 2.6 | 2.2 - 3.0 | 2.53 ± 0.12 | (3)          | LC    |
|                        | 50328  | ug/g  | ---       | ---         | ---       | --- | ---       | 2.5         | (2)          | GC-MS |
|                        | 50328  | ug/g  | ---       | ---         | ---       | --- | ---       | 3.0         | (1)          | GC    |
| Benzo[e]pyrene         | 192972 | ug/g  | 3.3       | 3.5 ± 0.4   | (4)       | 3.3 | 3.1 - 3.9 | 3.35        | (2)          | GC-MS |
|                        | 192972 | ug/g  | ---       | ---         | ---       | --- | ---       | 3.3         | (1)          | GC    |
|                        | 192972 | ug/g  | ---       | ---         | ---       | --- | ---       | 3.9         | (1)          | LC    |
| Chrysene               | 218019 | ug/g  | 3.6       | 3.63 ± 0.15 | (4)       | 3.7 | 3.5 - 4.6 | 3.8         | (1)          | GC-MS |
|                        | 218019 | ug/g  | ---       | ---         | ---       | --- | ---       | 3.57 ± 0.12 | (3)          | LC    |
|                        | 218019 | ug/g  | ---       | ---         | ---       | --- | ---       | 4.6         | (1)          | GC    |
| Dibenz[a,h]anthracene  | 53703  | ng/g  | 410       | 430         | (2)       | --- | 410 - 450 | 430         | (2)          | LC    |
| Fluoranthene           | 206440 | ug/g  | 7.1 ± 0.5 | 7.08 ± 0.19 | (6)       | 7.0 | 6.8 - 7.3 | 7.3         | (1)          | GC    |
|                        | 206440 | ug/g  | ---       | ---         | ---       | --- | ---       | 7.15        | (2)          | GC-MS |
|                        | 206440 | ug/g  | ---       | ---         | ---       | --- | ---       | 6.97 ± 0.15 | (3)          | LC    |
| Indeno[1,2,3-cd]pyrene | 193395 | ug/g  | 3.3 ± 0.5 | 3.52 ± 0.25 | (6)       | 3.4 | 3.3 - 4.0 | 3.47 ± 0.12 | (3)          | LC    |
|                        | 193395 | ug/g  | ---       | ---         | ---       | --- | ---       | 3.7         | (2)          | GC-MS |
|                        | 193395 | ug/g  | ---       | ---         | ---       | --- | ---       | 3.3         | (1)          | GC    |
| Perylene               | 198550 | ng/g  | 760       | 750 ± 120   | (6)       | 740 | 570 - 900 | 730 ± 75    | (3)          | LC    |
|                        | 198550 | ng/g  | ---       | ---         | ---       | --- | ---       | 735         | (2)          | GC-MS |
|                        | 198550 | ng/g  | ---       | ---         | ---       | --- | ---       | 840         | (1)          | GC    |
| Phenanthrene           | 85018  | ug/g  | 4.5 ± 0.3 | 4.72 ± 0.18 | (4)       | 4.7 | 4.5 - 4.9 | 4.6         | (2)          | LC    |
|                        | 85018  | ug/g  | ---       | ---         | ---       | --- | ---       | 4.85        | (2)          | GC-MS |
| Pyrene                 | 129000 | ug/g  | 6.6       | 6.2 ± 0.5   | (6)       | 6.0 | 5.8 - 7.2 | 7.2         | (1)          | GC    |
|                        | 129000 | ug/g  | ---       | ---         | ---       | --- | ---       | 5.9         | (2)          | GC-MS |
|                        | 129000 | ug/g  | ---       | ---         | ---       | --- | ---       | 6.17 ± 0.15 | (3)          | LC    |
| Triphenylene           | 217594 | ug/g  | 1.7       | 1.7         | (1)       | --- | ---       | 1.7         | (1)          | LC    |

TABLE 1649-1: COMPILED DATA FOR NBS SRM 1649 URBAN DUST/ ORGANICS (cont.)  
 (revised 3/1/86)

| ELEMENT | UNITS | NBS  | ELEMENT | UNITS | NBS  |
|---------|-------|------|---------|-------|------|
| Ag      | ug/g  | 3.5  | La      | ug/g  | 33.3 |
| As      | ug/g  | 67   | Mo      | ug/g  | 14   |
| Ba      | ug/g  | 570  | Rb      | ug/g  | 47   |
| Br      | ug/g  | 1190 | S       | %     | 3.27 |
| Cd      | ug/g  | 18   | Sb      | ug/g  | 29.9 |
| Ce      | ug/g  | 51.6 | Sc      | ug/g  | 8.73 |
| Cl      | ug/g  | 2820 | Se      | ug/g  | 25.6 |
| Co      | ug/g  | 16.4 | Sm      | ug/g  | 4.71 |
| Cr      | ug/g  | 211  | Sn      | ug/g  | 56   |
| Cs      | ug/g  | 2.85 | Th      | ug/g  | 6.63 |
| Eu      | ug/g  | 0.87 | U       | ug/g  | 2.65 |
| Fe      | %     | 3.00 | W       | ug/g  | 3.8  |
| Hf      | ug/g  | 4.41 | Zn      | ug/g  | 1670 |

TABLE 1649-2: INDIVIDUAL DATA FOR NBS SRM 1649 (revised 3/1/86)

| Conc                               | Uncer | Com | Method | Reference | Conc                                 | Uncer | Com | Method | Reference |
|------------------------------------|-------|-----|--------|-----------|--------------------------------------|-------|-----|--------|-----------|
| <u>Anthracene (ng/g)</u>           |       |     |        |           | <u>Dibenz[a,h]anthracene (ng/g)</u>  |       |     |        |           |
| 500                                |       |     | GC-MS  | 84SIM 03  | 410                                  | 70    | 44  | LC     | 84MAY 01  |
|                                    |       |     |        |           | 450                                  | 40    | 44  | LC     | 84MAY 01  |
| <u>Benz[a]anthracene (ug/g)</u>    |       |     |        |           | <u>Fluoranthene (ug/g)</u>           |       |     |        |           |
| 2.4                                | 0.1   | 44  | LC     | 84MAY 01  | 6.8                                  | 0.4   | 44  | LC     | 84MAY 01  |
| 2.4                                | 0.1   |     | GC     | 84MAY 01  | 7                                    |       |     | GC-MS  | 84SIM 03  |
| 2.7                                | 0.1   | 44  | LC     | 84MAY 01  | 7                                    | 0.5   | 44  | LC     | 84MAY 01  |
| 2.8                                | 0.2   | 44  | LC     | 84MAY 01  | 7.1                                  | 0.5   | 44  | LC     | 84MAY 01  |
| 2.8                                | 1.1   |     | GC-MS  | 85GRE 01  | 7.3                                  | 0.2   |     | GC     | 84MAY 01  |
| 3.3                                |       |     | GC-MS  | 84SIM 03  | 7.3                                  | 2.7   |     | GC-MS  | 85GRE 01  |
| <u>Benzo[b]fluoranthene (ug/g)</u> |       |     |        |           | <u>Indeno[1,2,3-cd]pyrene (ug/g)</u> |       |     |        |           |
| 6                                  | 0.3   | 44  | LC     | 84MAY 01  | 3.3                                  | 0.3   |     | GC     | 84MAY 01  |
| 6.2                                | 0.3   | 44  | LC     | 84MAY 01  | 3.4                                  |       |     | GC-MS  | 84SIM 03  |
| <u>Benzo[k]fluoranthene (ug/g)</u> |       |     |        |           | 3.4                                  | 0.1   | 44  | LC     | 84MAY 01  |
| 2                                  | 0.1   | 44  | LC     | 84MAY 01  | 3.4                                  | 0.4   | 44  | LC     | 84MAY 01  |
| 2                                  | 0.1   | 44  | LC     | 84MAY 01  | 3.6                                  | 0.2   | 44  | LC     | 84MAY 01  |
| 2.1                                | 0.1   | 44  | LC     | 84MAY 01  | 4                                    | 9     |     | GC-MS  | 85GRE 01  |
| <u>Benzo[ghi]perylene (ug/g)</u>   |       |     |        |           | <u>Perylene (ng/g)</u>               |       |     |        |           |
| 3.9                                | 0.8   | 44  | LC     | 84MAY 01  | 570                                  |       |     | GC-MS  | 84SIM 03  |
| 4.1                                | 0.1   | 44  | LC     | 84MAY 01  | 650                                  | 20    | 44  | LC     | 84MAY 01  |
| 4.4                                |       |     | GC-MS  | 84SIM 03  | 740                                  | 50    | 44  | LC     | 84MAY 01  |
| 4.7                                | 0.2   |     | GC     | 84MAY 01  | 800                                  | 40    | 44  | LC     | 84MAY 01  |
| 5                                  | 9     |     | GC-MS  | 85GRE 01  | 840                                  | 90    |     | GC     | 84MAY 01  |
| 5.2                                | 0.6   | 44  | LC     | 84MAY 01  | 900                                  | 100   |     | GC-MS  | 85GRE 01  |
| <u>Benzo[a]pyrene (ug/g)</u>       |       |     |        |           | <u>Phenanthrene (ug/g)</u>           |       |     |        |           |
| 2.2                                | 1.4   |     | GC-MS  | 85GRE 01  | 4.5                                  | 0.3   | 44  | LC     | 84MAY 01  |
| 2.4                                | 0.2   | 44  | LC     | 84MAY 01  | 4.7                                  | 0.1   | 44  | LC     | 84MAY 01  |
| 2.6                                | 0.1   | 44  | LC     | 84MAY 01  | 4.8                                  |       |     | GC-MS  | 84SIM 03  |
| 2.6                                | 0.4   | 44  | LC     | 84MAY 01  | 4.9                                  | 1.3   |     | GC-MS  | 85GRE 01  |
| 2.8                                |       |     | GC-MS  | 84SIM 03  | <u>Pyrene (ug/g)</u>                 |       |     |        |           |
| 3                                  | 0.3   |     | GC     | 84MAY 01  | 5.8                                  |       |     | GC-MS  | 84SIM 03  |
| <u>Benzo[e]pyrene (ug/g)</u>       |       |     |        |           | 6                                    | 0.2   | 44  | LC     | 84MAY 01  |
| 3.1                                | 1.8   |     | GC-MS  | 85GRE 01  | 6                                    | 2.1   |     | GC-MS  | 85GRE 01  |
| 3.3                                | 0.2   |     | GC     | 84MAY 01  | 6.2                                  | 0.2   | 44  | LC     | 84MAY 01  |
| 3.6                                |       |     | GC-MS  | 84SIM 03  | 6.3                                  | 0.4   | 44  | LC     | 84MAY 01  |
| 3.9                                | 0.3   |     | LC     | 84MAY 01  | 7.2                                  | 0.2   |     | GC     | 84MAY 01  |
| <u>Chrysene (ug/g)</u>             |       |     |        |           | <u>Triphenylene (ug/g)</u>           |       |     |        |           |
| 3.5                                | 0.1   | 44  | LC     | 84MAY 01  | 1.7                                  | 0.1   |     | LC     | 84MAY 01  |
| 3.5                                | 0.1   | 44  | LC     | 84MAY 01  |                                      |       |     |        |           |
| 3.7                                | 0.2   | 44  | LC     | 84MAY 01  |                                      |       |     |        |           |
| 3.8                                | 1.1   |     | GC-MS  | 85GRE 01  |                                      |       |     |        |           |
| 4.6                                | 0.2   |     | GC     | 84MAY 01  |                                      |       |     |        |           |

TABLE 1818-1: COMPILED DATA FOR NBS SRM 1818 CHLORINE IN LUBRICATING BASE OIL (revised 3/1/87)

| ELEMENT | UNITS | NBS       |
|---------|-------|-----------|
|         |       | Mean ± SD |
| Cl-I    | ug/g  | 29 ± 5    |
| Cl-II   | ug/g  | 63 ± 4    |
| Cl-III  | ug/g  | 78 ± 4    |
| Cl-IV   | ug/g  | 231 ± 6   |
| Cl-V    | ug/g  | 558 ± 11  |

TABLE 1819-1: COMPILED DATA FOR NBS SRM 1819 SULFUR IN LUBRICATING BASE OIL (revised 3/1/87)

| ELEMENT | UNITS | NBS           |
|---------|-------|---------------|
|         |       | Mean ± SD     |
| S-I     | ug/g  | 299 ± 8       |
| S-II    | ug/g  | 1070 ± 40     |
| S-III   | ug/g  | 2865 ± 70     |
| S-IV    | ug/g  | 6030 ± 130    |
| S-V     | %     | 1.055 ± 0.026 |

TABLE 1880-1: COMPILED DATA FOR NBS SRMS 1880-1883 CEMENTS (revised 3/1/87)

| ELEMENT | UNITS | SRM   |       |       |       |
|---------|-------|-------|-------|-------|-------|
|         |       | 1880  | 1881  | 1882  | 1883  |
|         |       | NBS   | NBS   | NBS   | NBS   |
| Al      | %     | 2.66  | 2.22  | 20.4  | 37.7  |
| B       | ug/g  | < 100 | < 100 | ---   | ---   |
| Ba      | ug/g  | < 100 | < 100 | ---   | ---   |
| Ca      | %     | 45.14 | 41.96 | 26.9  | 19.9  |
| Cl      | ug/g  | 200   | < 100 | ---   | ---   |
| Cr      | ug/g  | < 100 | < 100 | ---   | ---   |
| F       | ug/g  | 1000  | 900   | ---   | ---   |
| Fe      | %     | 2.03  | 3.27  | 11.0  | 0.056 |
| K       | ug/g  | 7600  | 9710  | 1000  | 80    |
| LOI     | %     | 1.38  | 2.01  | 1.58  | 0.42  |
| Mg      | %     | 1.62  | 1.58  | 0.75  | 0.17  |
| Mn      | ug/g  | 560   | 1800  | ---   | ---   |
| Na      | ug/g  | 2100  | 300   | 440   | 2400  |
| P       | ug/g  | 1260  | 390   | ---   | ---   |
| S       | %     | 1.35  | 1.46  | ---   | ---   |
| Si      | %     | 9.26  | 10.39 | 1.59  | 0.16  |
| Sr      | ug/g  | 510   | 930   | ---   | ---   |
| Ti      | ug/g  | 1400  | 1400  | 11000 | 60    |
| Zn      | ug/g  | 80    | 80    | ---   | ---   |
| Zr      | ug/g  | < 100 | < 100 | ---   | ---   |

TABLE 2661-1: COMPILED DATA FOR NBS SRM 2661 BENZENE ON CHARCOAL (revised 3/1/86)

| LEVEL | UNITS   | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean (n) | METHOD |
|-------|---------|----------------------|-----------------------|--------|
| I     | ug/tube | 14 $\pm$ 1           | ---                   | ---    |
| II    | ug/tube | 66 $\pm$ 3           | ---                   | ---    |
| III   | ug/tube | 258 $\pm$ 13         | ---                   | ---    |
| IV    | ug/tube | 994 $\pm$ 30         | ---                   | ---    |

TABLE 2661A-1: COMPILED DATA FOR NBS SRM 2661A BENZENE ON CHARCOAL (revised 3/1/86)

| LEVEL | UNITS   | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean (n) | METHOD |
|-------|---------|----------------------|-----------------------|--------|
| I     | ug/tube | 16 $\pm$ 1           | ---                   | ---    |
| II    | ug/tube | 30 $\pm$ 2           | 31 (1)                | GC     |
| III   | ug/tube | 54 $\pm$ 2           | 57.9 (1)              | GC     |

TABLE 2662-1: COMPILED DATA FOR NBS SRM 2662 M-XYLENE ON CHARCOAL (revised 3/1/86)

| LEVEL | UNITS   | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean (n) | METHOD |
|-------|---------|----------------------|-----------------------|--------|
| I     | ug/tube | 40 $\pm$ 2           | ---                   | ---    |
| II    | ug/tube | 293 $\pm$ 15         | ---                   | ---    |
| III   | mg/tube | 1.79 $\pm$ 0.09      | ---                   | ---    |
| IV    | mg/tube | 8.38 $\pm$ 0.38      | ---                   | ---    |

TABLE 2663-1: COMPILED DATA FOR NBS SRM 2663 1,4-DIOXANE ON CHARCOAL (revised 3/1/86)

| LEVEL | UNITS   | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean (n) | METHOD |
|-------|---------|----------------------|-----------------------|--------|
| I     | ug/tube | 16 $\pm$ 1           | ---                   | ---    |
| II    | ug/tube | 112 $\pm$ 6          | ---                   | ---    |
| III   | mg/tube | 0.996 $\pm$ 0.050    | 0.94 (1)              | GC     |
| IV    | mg/tube | 6.49 $\pm$ 0.20      | ---                   | ---    |

TABLE 2661A-2: INDIVIDUAL DATA FOR NBS SRM 2661A (revised 3/1/86)

| <u>Conc</u>                  | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|------------------------------|--------------|------------|---------------|------------------|
| <u>Benzene-II (ug/tube)</u>  |              |            |               |                  |
| 31                           |              |            | GC            | 86GAU 01         |
| <u>Benzene-III (ug/tube)</u> |              |            |               |                  |
| 57.9                         |              |            | GC            | 85GAU 04         |

TABLE 2663-2: INDIVIDUAL DATA FOR NBS SRM 2663 (revised 3/1/86)

| <u>Conc</u>                      | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|----------------------------------|--------------|------------|---------------|------------------|
| <u>1,4-Dioxane-III (mg/tube)</u> |              |            |               |                  |
| 0.94                             | 0.07         |            | GC            | 86GAU 01         |

TABLE 2664-1: COMPILED DATA FOR NBS SRM 2664 ETHYLENE CHLORIDE ON CHARCOAL (revised 3/1/86)

| LEVEL | UNITS   | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean (n) | METHOD |
|-------|---------|----------------------|-----------------------|--------|
| I     | ug/tube | 98 $\pm$ 5           | 100 (1)               | GC     |
| II    | ug/tube | 381 $\pm$ 19         | ---                   | ---    |
| III   | mg/tube | 1.56 $\pm$ 0.08      | 1.6 (1)               | GC     |
| IV    | mg/tube | 5.8 $\pm$ 0.17       | ---                   | ---    |

TABLE 2665-1: COMPILED DATA FOR NBS SRM 2665 CHLOROFORM ON CHARCOAL (revised 3/1/86)

| LEVEL | UNITS   | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean (n) | METHOD |
|-------|---------|----------------------|-----------------------|--------|
| I     | ug/tube | 147 $\pm$ 7          | ---                   | ---    |
| II    | ug/tube | 516 $\pm$ 26         | 510 (1)               | GC     |
| III   | mg/tube | 2.14 $\pm$ 0.1       | ---                   | ---    |
| IV    | mg/tube | 6.87 $\pm$ 0.21      | ---                   | ---    |

TABLE 2666-1: COMPILED DATA FOR NBS SRM 2666 TRICHLOROETHYLENE ON CHARCOAL (revised 3/1/86)

| LEVEL | UNITS   | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean (n) | METHOD |
|-------|---------|----------------------|-----------------------|--------|
| I     | ug/tube | 286 $\pm$ 14         | ---                   | ---    |
| II    | mg/tube | 1.03 $\pm$ 0.05      | ---                   | ---    |
| III   | mg/tube | 4.09 $\pm$ 0.20      | 5.3 (1)               | GC     |
| IV    | mg/tube | 15.4 $\pm$ 0.5       | ---                   | ---    |

TABLE 2667-1: COMPILED DATA FOR NBS SRM 2667 CARBON TETRACHLORIDE ON CHARCOAL (revised 3/1/86)

| LEVEL | UNITS   | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean (n) | METHOD |
|-------|---------|----------------------|-----------------------|--------|
| I     | ug/tube | 33 $\pm$ 3           | ---                   | ---    |
| II    | ug/tube | 114 $\pm$ 6          | ---                   | ---    |
| III   | ug/tube | 414 $\pm$ 21         | 580 (1)               | GC     |
| IV    | mg/tube | 1.58 $\pm$ 0.05      | ---                   | ---    |

TABLE 2664-2: INDIVIDUAL DATA FOR NBS SRM 2664 (revised 3/1/86)

| <u>Conc</u>                            | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|--|--------------|------------|---------------|------------------|
| <u>Ethylene Chloride-I (ug/tube)</u>   |              |            |               |                  |
| 100                                    |              |            | GC            | 86GAU 01         |
| <u>Ethylene Chloride-III (mg/tube)</u> |              |            |               |                  |
| 1.6                                    |              |            | GC            | 86GAU 01         |

TABLE 2665-2: INDIVIDUAL DATA FOR NBS SRM 2665 (revised 3/1/86)

| <u>Conc</u>                    | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|--------------------------------|--------------|------------|---------------|------------------|
| <u>Chloroform-II (ug/tube)</u> |              |            |               |                  |
| 510                            |              |            | GC            | 86GAU 01         |

TABLE 2666-2: INDIVIDUAL DATA FOR NBS SRM 2666 (revised 3/1/86)

| <u>Conc</u>                            | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|--|--------------|------------|---------------|------------------|
| <u>Trichloroethylene-III (mg/tube)</u> |              |            |               |                  |
| 5.3                                    |              |            | GC            | 86GAU 01         |

TABLE 2667-2: INDIVIDUAL DATA FOR NBS SRM 2667 (revised 3/1/86)

| <u>Conc</u>                               | <u>Uncer</u> | <u>Com</u> | <u>Method</u> | <u>Reference</u> |
|---|--------------|------------|---------------|------------------|
| <u>Carbon tetrachloride-III (ug/tube)</u> |              |            |               |                  |
| 580                                       |              |            | GC            | 86GAU 01         |

TABLE 2670-1: COMPILED DATA ON NBS SRM 2670 TRACE ELEMENTS IN URINE (revised 3/1/86)

| SAMPLE      | ELEMENT         | UNITS | NBS        |      | CONSENSUS<br>Mean (n) | METHOD |
|-------------|-----------------|-------|------------|------|-----------------------|--------|
|             |                 |       | Mean $\pm$ | SD   |                       |        |
| Entire pool | Dimethylsulfide | ug/L  | ---        |      | 2.73 (1)              | GC     |
|             | Dimethyltin     | ug/L  | ---        |      | 1.04 (1)              | GC     |
|             | Butyltin        | ug/L  | ---        |      | 0.03 (1)              | GC     |
|             | Ca              | mg/L  | 105 $\pm$  | 5    | ---                   | ---    |
|             | Cl              | g/L   | 4.4        |      | ---                   | ---    |
|             | K               | g/L   | 1.5        |      | ---                   | ---    |
|             | Mg              | mg/L  | 63 $\pm$   | 3    | ---                   | ---    |
|             | Na              | g/L   | 2.62 $\pm$ | 0.14 | ---                   | ---    |
|             | SO <sub>4</sub> | g/L   | 1.3        |      | ---                   | ---    |
|             | Normal          | Al    | ug/L       | 180  |                       | ---    |
| As          |                 | ug/L  | 15         |      | 62 (1)                | ICPES  |
| Be          |                 | ug/L  | < 0.5      |      | ---                   | ---    |
| Cd          |                 | ug/L  | 0.4        |      | ---                   | ---    |
| Cr          |                 | ug/L  | 13         |      | 10 (1)                | ICPES  |
| Cu          |                 | ug/L  | 130 $\pm$  | 20   | 135 (1)               | ICPES  |
| Hg          |                 | ug/L  | 20         |      | ---                   | ---    |
| Mn          |                 | ug/L  | 30         |      | 24 (1)                | ICPES  |
| Ni          |                 | ug/L  | 70         |      | 61 (1)                | ICPES  |
| Pb          |                 | ug/L  | 10         |      | ---                   | ---    |
| Pt          |                 | ug/L  | < 10       |      | ---                   | ---    |
| Se          |                 | ug/L  | 30 $\pm$   | 8    | 37 (1)                | ICPES  |
| Elevated    |                 | Al    | ug/L       | 180  |                       | ---    |
|             | As              | ug/L  | 480 $\pm$  | 100  | 504 (1)               | ICPES  |
|             | Be              | ug/L  | 33         |      | ---                   | ---    |
|             | Cd              | ug/L  | 88 $\pm$   | 3    | 85 (1)                | ICPES  |
|             | Cr              | ug/L  | 85 $\pm$   | 6    | 75 (1)                | ICPES  |
|             | Cu              | ug/L  | 370 $\pm$  | 30   | 359 (1)               | ICPES  |
|             | Hg              | ug/L  | 105 $\pm$  | 8    | ---                   | ---    |
|             | Mn              | ug/L  | 330        |      | 310 (1)               | ICPES  |
|             | Ni              | ug/L  | 300        |      | 257 (1)               | ICPES  |
|             | Pb              | ug/L  | 109 $\pm$  | 4    | 94 (1)                | ICPES  |
|             | Pt              | ug/L  | 110        |      | ---                   | ---    |
|             | Se              | ug/L  | 460 $\pm$  | 30   | 475 (1)               | ICPES  |

TABLE 2670-2: INDIVIDUAL DATA FOR NBS SRM 2670 Entire Pool (revised 3/1/86)

| Conc                  | Uncer | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|
| <u>(Me)2S2 (ug/L)</u> |       |     |        |           |
| 2.73                  |       |     | GC     | 830LS 02  |
| <u>(Me)2Sn (ug/L)</u> |       |     |        |           |
| 1.04                  |       |     | GC     | 830LS 02  |
| <u>BuSn (ug/L)</u>    |       |     |        |           |
| 0.03                  |       |     | GC     | 830LS 02  |

TABLE 2670N-2: INDIVIDUAL DATA FOR NBS SRM 2670 Normal Level (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>As (ug/L)</u> |       |     |        |           | <u>Mn (ug/L)</u> |       |     |        |           |
| 62               | 36    |     | ICPES  | 85KIM 01  | 24               | 2.8   |     | ICPES  | 85KIM 01  |
| <u>Cr (ug/L)</u> |       |     |        |           | <u>Ni (ug/L)</u> |       |     |        |           |
| 10               | 3.3   |     | ICPES  | 85KIM 01  | 61               | 13    |     | ICPES  | 85KIM 01  |
| <u>Cu (ug/L)</u> |       |     |        |           | <u>Se (ug/L)</u> |       |     |        |           |
| 135              | 12    |     | ICPES  | 85KIM 01  | 37               | 31    |     | ICPES  | 85KIM 01  |

TABLE 2670E-2: INDIVIDUAL DATA FOR NBS SRM 2670 Elevated Level (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>As (ug/L)</u> |       |     |        |           | <u>Mn (ug/L)</u> |       |     |        |           |
| 504              | 63    |     | ICPES  | 85KIM 01  | 310              | 6     |     | ICPES  | 85KIM 01  |
| <u>Cd (ug/L)</u> |       |     |        |           | <u>Ni (ug/L)</u> |       |     |        |           |
| 85               | 3.8   |     | ICPES  | 85KIM 01  | 257              | 25    |     | ICPES  | 85KIM 01  |
| <u>Cr (ug/L)</u> |       |     |        |           | <u>Pb (ug/L)</u> |       |     |        |           |
| 75               | 3.2   |     | ICPES  | 85KIM 01  | 94               | 20    |     | ICPES  | 85KIM 01  |
| <u>Cu (ug/L)</u> |       |     |        |           | <u>Se (ug/L)</u> |       |     |        |           |
| 359              | 12    |     | ICPES  | 85KIM 01  | 475              | 36    |     | ICPES  | 85KIM 01  |

TABLE 2671-1: COMPILED DATA ON NBS SRM 2671 FLUORIDE IN URINE (revised 3/1/86)

| SAMPLE   | ELEMENT | UNITS | NBS               |
|----------|---------|-------|-------------------|
|          |         |       | Mean $\pm$ SD     |
| Normal   | F       | mg/L  | 0.835 $\pm$ 0.082 |
| Elevated | F       | mg/L  | 7.14 $\pm$ 0.48   |

TABLE 2672-1: COMPILED DATA ON NBS SRM 2672 MERCURY IN URINE (revised 3/1/86)

| SAMPLE      | ELEMENT   | UNITS | NBS            | CONSENSUS | METHOD |
|-------------|-----------|-------|----------------|-----------|--------|
|             |           |       | Mean $\pm$ SD  | Mean (n)  |        |
| Entire pool | Butyltin  | ug/L  | ---            | 1.5 (1)   | GC     |
|             | Methyltin | ug/L  | ---            | 1.0 (1)   | GC     |
|             | Sn        | ug/L  | ---            | 28.1 (1)  | GC     |
| Normal      | Hg        | ug/L  | 49.8 $\pm$ 4.2 | ---       | ---    |
| Elevated    | Hg        | ug/L  | 294 $\pm$ 24   | ---       | ---    |

TABLE 2672-2: INDIVIDUAL DATA FOR NBS SRM 2672 Entire Pool (revised 3/1/86)

| Conc               | Uncer | Com | Method | Reference |
|--------------------|-------|-----|--------|-----------|
| <u>BuSn (ug/L)</u> |       |     |        |           |
| 1.5                |       |     | GC     | 830LS 02  |
| <u>MeSn (ug/L)</u> |       |     |        |           |
| 1                  |       |     | GC     | 830LS 02  |
| <u>Sn (ug/L)</u>   |       |     |        |           |
| 28.1               |       |     | GC     | 830LS 02  |

TABLE 2674-1: COMPILED DATA FOR NBS SRM 2674 LEAD ON FILTER MEDIA (revised 3/1/86)

| ELEMENT  | UNITS | NBS   |         |
|----------|-------|-------|---------|
|          |       | Mean  | ± SD    |
| Pb-Blank | ug/f  | 1.4   | ± 0.7   |
| Pb-I     | ug/f  | 100   | ± 3     |
| Pb-II    | ug/f  | 303   | ± 9     |
| Pb-III   | mg/f  | 1.505 | ± 0.028 |

TABLE 2675-1: COMPILED DATA FOR NBS SRM 2675 BERYLLIUM ON FILTER MEDIA (revised 3/1/86)

| ELEMENT | UNITS | NBS  |        | CONSENSUS<br>Mean (n) | METHOD |
|---------|-------|------|--------|-----------------------|--------|
|         |       | Mean | ± SD   |                       |        |
| Be-I    | ng/f  | 52   | ± 7    | ---                   | ---    |
| Be-II   | ug/f  | 0.25 | ± 0.03 | 0.35 (1)              | AA     |
| Be-III  | ug/f  | 1.0  | ± 0.1  | ---                   | ---    |

TABLE 2675-2: INDIVIDUAL DATA FOR NBS SRM 2675 (revised 3/1/86)

| Conc                     | Uncer | Com | Method | Reference |
|--------------------------|-------|-----|--------|-----------|
| <u>Be-II (ug/filter)</u> |       |     |        |           |
| 0.35                     |       |     | AA     | 85GAU 04  |

TABLE 2676-1: COMPILED DATA FOR NBS SRM 2676 METALS ON FILTER MEDIA (revised 3/1/86)

| ELEMENT | UNITS | NBS  |        |
|---------|-------|------|--------|
|         |       | Mean | ± SD   |
| Cd-I    | ng/f  | 500  | ± 40   |
| Cd-II   | ug/f  | 2.48 | ± 0.14 |
| Cd-III  | ug/f  | 10.1 | ± 0.4  |
| Mn-I    | ug/f  | 1.93 | ± 0.29 |
| Mn-II   | ug/f  | 10.3 | ± 1.5  |
| Mn-III  | ug/f  | 20.6 | ± 1.0  |
| Pb-I    | ug/f  | 6.8  | ± 1.1  |
| Pb-II   | ug/f  | 29   | ± 2.6  |
| Pb-III  | ug/f  | 102  | ± 6    |
| Zn-I    | ug/f  | 1.02 | ± 0.06 |
| Zn-II   | ug/f  | 5.1  | ± 0.26 |
| Zn-III  | ug/f  | 10.1 | ± 1.1  |

TABLE 2676A-1: COMPILED DATA FOR NBS SRM 2676A METALS ON FILTER MEDIA (revised 3/1/86)

| ELEMENT  | UNITS | NBS     |      | CONSENSUS<br>Mean (n) | METHOD |
|----------|-------|---------|------|-----------------------|--------|
|          |       | Mean ±  | SD   |                       |        |
| Cd-Blank | ug/f  | ---     |      | 0.03 (1)              | AA     |
| Cd-I     | ug/f  | 1.02 ±  | 0.03 | ---                   | ---    |
| Cd-II    | ug/f  | 2.5 ±   | 0.02 | 2.47 (1)              | AA     |
| Cd-III   | ug/f  | 10.18 ± | 0.10 | 9.8 (1)               | AA     |
| Mn-I     | ug/f  | 1.97 ±  | 0.06 | ---                   | ---    |
| Mn-II    | ug/f  | 9.89 ±  | 0.1  | ---                   | ---    |
| Mn-III   | ug/f  | 19.7 ±  | 0.3  | ---                   | ---    |
| Pb-Blank | ug/f  | ---     |      | 0.17 (1)              | AA     |
| Pb-I     | ug/f  | 6.96 ±  | 0.2  | ---                   | ---    |
| Pb-II    | ug/f  | 15.23 ± | 0.15 | 15.6 (1)              | AA     |
| Pb-III   | ug/f  | 29.64 ± | 0.2  | 28.7 (1)              | AA     |
| Zn-Blank | ug/f  | ---     |      | 8.1 (1)               | AA     |
| Zn-I     | ug/f  | 9.86 ±  | 0.28 | ---                   | ---    |
| Zn-II    | ug/f  | 49.52 ± | 0.48 | 47.6 (1)              | AA     |
| Zn-III   | ug/f  | 99.22 ± | 0.99 | 95 (1)                | AA     |

TABLE 2676A-2: INDIVIDUAL DATA FOR NBS SRM 2676A (revised 3/1/86)

| Conc                        | Uncer | Com | Method | Reference | Conc                        | Uncer | Com | Method | Reference |
|-----------------------------|-------|-----|--------|-----------|-----------------------------|-------|-----|--------|-----------|
| <u>Cd-blank (ug/filter)</u> |       |     |        |           | <u>Pb-III (ug/filter)</u>   |       |     |        |           |
| 0.03                        |       |     | AA     | 85GAU 04  | 28.7                        |       |     | AA     | 85GAU 04  |
| <u>Cd-II (ug/filter)</u>    |       |     |        |           | <u>Zn-blank (ug/filter)</u> |       |     |        |           |
| 2.47                        |       |     | AA     | 85GAU 04  | 8.1                         |       |     | AA     | 85GAU 04  |
| <u>Cd-III (ug/filter)</u>   |       |     |        |           | <u>Zn-II (ug/filter)</u>    |       |     |        |           |
| 9.8                         |       |     | AA     | 85GAU 04  | 47.6                        |       |     | AA     | 85GAU 04  |
| <u>Pb-blank (ug/filter)</u> |       |     |        |           | <u>Zn-III (ug/filter)</u>   |       |     |        |           |
| 0.17                        |       |     | AA     | 85GAU 04  | 95                          |       |     | AA     | 85GAU 04  |
| <u>Pb-II (ug/filter)</u>    |       |     |        |           |                             |       |     |        |           |
| 15.6                        |       |     | AA     | 85GAU 04  |                             |       |     |        |           |

TABLE 2676B-1: COMPILED DATA FOR NBS SRM 2676B METALS ON FILTER MEDIA (revised 3/1/86)

| ELEMENT  | UNITS | NBS    |        |
|----------|-------|--------|--------|
|          |       | Mean   | SD     |
| Cd-Blank | ug/f  | < 0.01 |        |
| Cd-I     | ug/f  | 0.99   | ± 0.02 |
| Cd-II    | ug/f  | 2.49   | ± 0.04 |
| Cd-III   | ug/f  | 10.14  | ± 0.12 |
| Mn-Blank | ug/f  | < 0.01 |        |
| Mn-I     | ug/f  | 1.88   | ± 0.03 |
| Mn-II    | ug/f  | 9.41   | ± 0.13 |
| Mn-III   | ug/f  | 18.5   | ± 0.3  |
| Pb-Blank | ug/f  | < 0.04 |        |
| Pb-I     | ug/f  | 7.55   | ± 0.1  |
| Pb-II    | ug/f  | 14.9   | ± 0.2  |
| Pb-III   | ug/f  | 30.4   | ± 0.4  |
| Zn-Blank | ug/f  | 0.4    | ± 0.1  |
| Zn-I     | ug/f  | 10.01  | ± 0.14 |
| Zn-II    | ug/f  | 49.7   | ± 0.7  |
| Zn-III   | ug/f  | 99.5   | ± 1.2  |

TABLE 2677-1: COMPILED DATA FOR NBS SRM 2677 BERYLLIUM AND ARSENIC ON FILTER MEDIA (revised 3/1/86)

| ELEMENT  | UNITS | NBS  |        |
|----------|-------|------|--------|
|          |       | Mean | SD     |
| As-Blank | ng/f  | < 2  |        |
| As-I     | ng/f  | 103  | ± 5    |
| As-II    | ug/f  | 1.07 | ± 0.05 |
| As-III   | ug/f  | 10.5 | ± 0.5  |
| Be-Blank | ng/f  | < 1  |        |
| Be-I     | ng/f  | 52   | ± 3    |
| Be-II    | ng/f  | 256  | ± 13   |
| Be-III   | ug/f  | 1.03 | ± 0.05 |

TABLE 2679-1: COMPILED DATA FOR NBS SRM 2679 QUARTZ ON FILTER MEDIA (revised 3/1/86)

| MATERIAL | UNITS | NBS   |        |
|----------|-------|-------|--------|
|          |       | Mean  | SD     |
| Clay-A   | ug/f  | 400   |        |
| Clay-B   | ug/f  | 370   |        |
| Clay-C   | ug/f  | 320   |        |
| Clay-D   | ug/f  | 200   |        |
| Quartz-A | ug/f  | 3.8   | ± 0.5  |
| Quartz-B | ug/f  | 29.9  | ± 3.6  |
| Quartz-C | ug/f  | 76.1  | ± 9.1  |
| Quartz-D | ug/f  | 193.2 | ± 23.2 |

TABLE 2682-1: COMPILED DATA FOR NBS SRM 2682 SULFUR IN COAL (revised 3/1/86)

| ELEMENT | UNITS  | NBS   |      | CONSENSUS   |     | MEDIAN | RANGE        | METHOD MEANS |      |      |     |
|---------|--------|-------|------|-------------|-----|--------|--------------|--------------|------|------|-----|
|         |        | Mean  | SD   | Mean        | SD  |        |              | (n)          | Mean | SD   | (n) |
| ASH     | %      | 6.37  | 0.18 | ---         | --- | ---    | ---          | ---          | ---  | ---  | --- |
| Ag      | ng/g   | ---   | ---  | < 1000      | --- | ---    | ---          | < 1000       | ---  | ---  | --- |
| Al      | ug/g   | 4600  | ---  | 4290 ± 290  | (3) | 4140   | 4100 - 4620  | 4290 ± 290   | (3)  | NAA  | --- |
| As      | ug/g   | 1     | ---  | 0.89 ± 0.16 | (3) | 0.96   | 0.7 - 1      | 0.89 ± 0.16  | (3)  | NAA  | --- |
| Au      | ng/g   | ---   | ---  | < 6         | --- | ---    | ---          | < 6          | ---  | ---  | --- |
| B       | ug/g   | 39    | ---  | 39          | (1) | ---    | ---          | 39           | (1)  | TCGS | --- |
| Ba      | ug/g   | 382   | ---  | 361         | (2) | ---    | 340 - 382    | 361          | (2)  | NAA  | --- |
| Br      | ug/g   | 3.7   | ---  | 3.5 ± 0.3   | (3) | 3.64   | 3.1 - 3.74   | 3.5 ± 0.3    | (3)  | NAA  | --- |
| C       | %      | 75    | ---  | 76          | (1) | ---    | ---          | 76           | (1)  | TCGS | --- |
| Ca      | %      | 1.1   | ---  | 1.03        | (1) | ---    | ---          | 1.03         | (1)  | NAA  | --- |
| Ce      | ug/g   | 10    | ---  | 9.87        | (1) | ---    | ---          | 9.87         | (1)  | NAA  | --- |
| Cl      | ug/g   | ---   | ---  | 37          | (1) | ---    | ---          | 37           | (1)  | NAA  | --- |
| Co      | ug/g   | 1.7   | ---  | 1.50        | (2) | ---    | 1.33 - 1.66  | 1.50         | (2)  | NAA  | --- |
| Cr      | ug/g   | 15    | ---  | 15.2        | (2) | ---    | 15 - 15.4    | 15.2         | (2)  | NAA  | --- |
| Cs      | ng/g   | < 100 | ---  | ---         | --- | ---    | ---          | ---          | ---  | ---  | --- |
| Dy      | ug/g   | ---   | ---  | 0.6         | (1) | ---    | ---          | 0.6          | (1)  | NAA  | --- |
| Eu      | ng/g   | 170   | ---  | 156         | (2) | ---    | 140 - 172    | 156          | (2)  | NAA  | --- |
| Fe      | ug/g   | 2400  | ---  | 2260        | (2) | ---    | 2100 - 2420  | 2260         | (2)  | NAA  | --- |
| Ga      | ug/g   | ---   | ---  | < 6         | --- | ---    | ---          | < 6          | ---  | ---  | --- |
| H       | %      | 4.7   | ---  | 4.7         | (1) | ---    | ---          | 4.7          | (1)  | TCGS | --- |
| H2O-    | %      | 18    | ---  | ---         | --- | ---    | ---          | ---          | ---  | ---  | --- |
| HEAT    | btu/lb | 11800 | 240  | ---         | --- | ---    | ---          | ---          | ---  | ---  | --- |
| Hf      | ng/g   | 600   | ---  | 565         | (2) | ---    | 530 - 600    | 565          | (2)  | NAA  | --- |
| K       | ug/g   | 100   | ---  | 117         | (1) | ---    | ---          | 117          | (1)  | NAA  | --- |
| La      | ug/g   | 5.2   | ---  | 4.4 ± 0.8   | (3) | 4.59   | 3.56 - 5.17  | 4.4 ± 0.8    | (3)  | NAA  | --- |
| Lu      | ng/g   | ---   | ---  | < 30        | --- | ---    | ---          | < 30         | ---  | ---  | --- |
| Mg      | ug/g   | 2000  | ---  | ---         | --- | ---    | ---          | ---          | ---  | ---  | --- |
| Mn      | ug/g   | 26    | ---  | 22.2        | (2) | ---    | 21.8 - 22.6  | 22.2         | (2)  | NAA  | --- |
| Mo      | ug/g   | ---   | ---  | < 5         | --- | ---    | ---          | < 5          | ---  | ---  | --- |
| N       | %      | 0.8   | ---  | 0.8         | (1) | ---    | ---          | 0.8          | (1)  | TCGS | --- |
| Na      | ug/g   | 1000  | ---  | 895         | (2) | ---    | 810 - 981    | 896          | (2)  | NAA  | --- |
| Rb      | ug/g   | < 2   | ---  | ---         | --- | ---    | ---          | ---          | ---  | ---  | --- |
| S       | ug/g   | 4700  | 300  | 4700 ± 180  | (5) | 4670   | 4470 - 4940  | 4690 ± 110   | (3)  | CB   | --- |
| S       | ug/g   | ---   | ---  | ---         | --- | ---    | ---          | 4940         | (1)  | IDMS | --- |
| S       | ug/g   | ---   | ---  | ---         | --- | ---    | ---          | 4470         | (1)  | TCGS | --- |
| S-32/34 | ratio  | ---   | ---  | 22.699      | (1) | ---    | ---          | 22.699       | (1)  | IDMS | --- |
| S-33/34 | ratio  | ---   | ---  | 0.1783      | (1) | ---    | ---          | 0.1783       | (1)  | IDMS | --- |
| Sb      | ng/g   | 190   | ---  | 189         | (1) | ---    | ---          | 189          | (1)  | NAA  | --- |
| Sc      | ug/g   | 1.5   | ---  | 1.41        | (2) | ---    | 1.3 - 1.524  | 1.41         | (2)  | NAA  | --- |
| Se      | ug/g   | 0.91  | ---  | 0.91        | (1) | ---    | ---          | 0.91         | (1)  | NAA  | --- |
| Sm      | ng/g   | 780   | ---  | 704         | (2) | ---    | 633 - 776    | 704          | (2)  | NAA  | --- |
| Ta      | ng/g   | ---   | ---  | < 400       | --- | ---    | ---          | < 400        | ---  | ---  | --- |
| Tb      | ng/g   | ---   | ---  | < 100       | --- | ---    | ---          | < 100        | ---  | ---  | --- |
| Th      | ug/g   | 1.5   | ---  | 1.43        | (2) | ---    | 1.33 - 1.532 | 1.43         | (2)  | NAA  | --- |
| Ti      | ug/g   | 500   | ---  | 540         | (1) | ---    | ---          | 540          | (1)  | NAA  | --- |
| U       | ng/g   | 520   | ---  | 490 ± 35    | (3) | 500    | 448 - 519    | 490 ± 35     | (3)  | NAA  | --- |
| V       | ug/g   | 15    | ---  | 13.45       | (2) | ---    | 13 - 13.9    | 13.45        | (2)  | NAA  | --- |
| W       | ug/g   | 1.8   | ---  | 1.46        | (2) | ---    | 1.1 - 1.81   | 1.46         | (2)  | NAA  | --- |
| Yb      | ng/g   | ---   | ---  | < 300       | --- | ---    | ---          | < 300        | ---  | ---  | --- |
| Zn      | ug/g   | 8.6   | ---  | 8.6         | (1) | ---    | ---          | 8.6          | (1)  | NAA  | --- |
| Zr      | ug/g   | ---   | ---  | < 100       | --- | ---    | ---          | < 100        | ---  | ---  | --- |

TABLE 2682-2: INDIVIDUAL DATA FOR NBS SRM 2682 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Co (ug/g)</u> |       |     |        |           |
| <                | 1000  |     | ITNA   | 86GLA 01  | 1.33             | 0.15  |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 1.66             | 0.03  |     | ITNA   | 83LIN 02  |
| <u>Al (ug/g)</u> |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| 4100             | 200   |     | ITNA   | 86GLA 01  | 15               | 0.8   |     | ITNA   | 86GLA 01  |
| 4140             | 120   |     | ITNA   | 85GAU 04  | 15.4             | 0.3   |     | ITNA   | 83LIN 02  |
| 4620             | 20    |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>As (ug/g)</u> |       |     |        |           | <u>Dy (ug/g)</u> |       |     |        |           |
| 0.7              | 0.3   |     | ITNA   | 86GLA 01  | 0.6              | 0.2   |     | ITNA   | 86GLA 01  |
| 0.96             | 0.06  |     | ITNA   | 85GAU 04  |                  |       |     |        |           |
| 1                | 0.02  |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>Au (ng/g)</u> |       |     |        |           | <u>Eu (ng/g)</u> |       |     |        |           |
| <                | 6     |     | ITNA   | 86GLA 01  | 140              | 40    |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 172              | 5     |     | ITNA   | 83LIN 02  |
| <u>B (ug/g)</u>  |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| 39               | 1.3   |     | TCGS   | 83LIN 02  | 2100             | 200   |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 2420             | 30    |     | ITNA   | 83LIN 02  |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Ga (ug/g)</u> |       |     |        |           |
| 340              | 20    |     | ITNA   | 86GLA 01  | <                | 6     |     | ITNA   | 86GLA 01  |
| 382              | 5     |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>Br (ug/g)</u> |       |     |        |           | <u>H (%)</u>     |       |     |        |           |
| 3.1              | 0.3   |     | ITNA   | 86GLA 01  | 4.7              | 0.13  |     | TCGS   | 83LIN 02  |
| 3.64             | 0.19  |     | ITNA   | 85GAU 04  |                  |       |     |        |           |
| 3.74             | 0.18  |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>C (%)</u>     |       |     |        |           | <u>Hf (ng/g)</u> |       |     |        |           |
| 76               | 3.8   |     | TCGS   | 83LIN 02  | 530              | 40    |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 600              | 20    |     | ITNA   | 83LIN 02  |
| <u>Ca (%)</u>    |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| 1.03             | 0.1   |     | ITNA   | 86GLA 01  | <                | 700   |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 117              | 14    |     | ITNA   | 83LIN 02  |
| <u>Ce (ug/g)</u> |       |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| 9.87             | 0.08  |     | ITNA   | 83LIN 02  | 3.56             | 0.13  |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 4.59             | 0.14  |     | ITNA   | 85GAU 04  |
|                  |       |     |        |           | 5.17             | 0.03  |     | ITNA   | 83LIN 02  |
| <u>Cl (ug/g)</u> |       |     |        |           | <u>Lu (ng/g)</u> |       |     |        |           |
| <                | 40    |     | ITNA   | 86GLA 01  | <                | 30    |     | ITNA   | 86GLA 01  |
| 37               | 4     |     | ITNA   | 85GAU 04  |                  |       |     |        |           |

TABLE 2682-2: INDIVIDUAL DATA FOR NBS SRM 2682 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mn (ug/g)</u>       |       |     |        |           | <u>Ta (ng/g)</u> |       |     |        |           |
| 21.8                   | 0.1   |     | ITNA   | 86GLA 01  | <                | 400   |     | ITNA   | 86GLA 01  |
| 22.6                   | 0.8   |     | ITNA   | 85GAU 04  | <u>Tb (ng/g)</u> |       |     |        |           |
| <u>Mo (ug/g)</u>       |       |     |        |           | <                | 100   |     | ITNA   | 86GLA 01  |
| <                      | 5     |     | ITNA   | 86GLA 01  | <u>Th (ug/g)</u> |       |     |        |           |
| <u>N (%)</u>           |       |     |        |           | 1.33             | 0.06  |     | ITNA   | 86GLA 01  |
| 0.8                    | 0.3   |     | TCGS   | 83LIN 02  | 1.532            | 0.014 |     | ITNA   | 83LIN 02  |
| <u>Na (ug/g)</u>       |       |     |        |           | <u>Ti (ug/g)</u> |       |     |        |           |
| 810                    | 30    |     | ITNA   | 86GLA 01  | 540              | 200   |     | ITNA   | 86GLA 01  |
| 981                    | 12    |     | ITNA   | 85GAU 04  | <u>U (ng/g)</u>  |       |     |        |           |
| <u>S (ug/g)</u>        |       |     |        |           | 448              | 23    |     | DNA    | 86GLA 01  |
| 4470                   | 130   |     | TCGS   | 83LIN 02  | 500              |       |     | DNA    | 86GAU 01  |
| 4600                   | 200   |     | CB     | 84GLA 11  | 519              | 15    |     | ITNA   | 83LIN 02  |
| 4670                   | 60    |     | CB     | 86GAU 01  | <u>V (ug/g)</u>  |       |     |        |           |
| 4810                   | 50    |     | CB     | 85GLA 03  | 13               | 1     |     | ITNA   | 86GLA 01  |
| 4940                   | 110   |     | IDMS   | 84KEL 01  | 13.9             | 0.7   |     | ITNA   | 85GAU 04  |
| <u>S-32/34 (ratio)</u> |       |     |        |           | <u>W (ug/g)</u>  |       |     |        |           |
| 22.699                 |       |     | IDMS   | 84KEL 01  | 1.1              | 0.3   |     | ITNA   | 86GLA 01  |
| <u>S-33/34 (ratio)</u> |       |     |        |           | 1.81             | 0.03  |     | ITNA   | 83LIN 02  |
| 0.1783                 |       |     | IDMS   | 84KEL 01  | <u>Yb (ng/g)</u> |       |     |        |           |
| <u>Sb (ng/g)</u>       |       |     |        |           | <                | 300   |     | ITNA   | 86GLA 01  |
| <                      | 150   |     | ITNA   | 86GLA 01  | <u>Zn (ug/g)</u> |       |     |        |           |
| 189                    | 9     |     | ITNA   | 83LIN 02  | <                | 10    |     | ITNA   | 86GLA 01  |
| <u>Sc (ug/g)</u>       |       |     |        |           | 8.6              | 0.9   |     | ITNA   | 83LIN 02  |
| 1.3                    | 0.1   |     | ITNA   | 86GLA 01  | <u>Zr (ug/g)</u> |       |     |        |           |
| 1.524                  | 0.005 |     | ITNA   | 83LIN 02  | <                | 100   |     | ITNA   | 86GLA 01  |
| <u>Se (ug/g)</u>       |       |     |        |           |                  |       |     |        |           |
| <                      | 1     |     | ITNA   | 86GLA 01  |                  |       |     |        |           |
| 0.91                   | 0.1   |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>Sm (ng/g)</u>       |       |     |        |           |                  |       |     |        |           |
| 633                    | 16    |     | ITNA   | 85GAU 04  |                  |       |     |        |           |
| 776                    | 4     |     | ITNA   | 83LIN 02  |                  |       |     |        |           |

TABLE 2683-1: COMPILED DATA FOR NBS SRM 2683 SULFUR IN COAL (revised 3/1/86)

| ELEMENT | UNITS  | NBS   |        | CONSENSUS |            | MEDIAN | RANGE        | METHOD MEANS |            |    |      |
|---------|--------|-------|--------|-----------|------------|--------|--------------|--------------|------------|----|------|
|         |        | Mean  | SD     | Mean      | SD         |        |              | (n)          | Mean       | SD | (n)  |
| ASH     | %      | 6.85  | ± 0.02 | ---       |            | ---    | ---          | ---          |            |    |      |
| Ag      | ng/g   | ---   |        | < 900     |            | ---    | ---          | < 900        |            |    | NAA  |
| Al      | ug/g   | 8600  |        | 8590      | (2)        | ---    | 8580 - 8600  | 8590         | (2)        |    | NAA  |
| As      | ug/g   | 3.6   |        | 3.82      | (2)        | ---    | 3.64 - 4     | 3.82         | (2)        |    | NAA  |
| Au      | ng/g   | ---   |        | < 5       |            | ---    | ---          | < 5          |            |    | NAA  |
| B       | ug/g   | 67    |        | 67        | (1)        | ---    | ---          | 67           | (1)        |    | TCGS |
| Ba      | ug/g   | 71    |        | 71        | (1)        | ---    | ---          | 71           | (1)        |    | NAA  |
| Br      | ug/g   | 17    |        | 17.3      | (2)        | ---    | 16.85 - 17.8 | 17.3         | (2)        |    | NAA  |
| C       | %      | 79    |        | 79        | (1)        | ---    | ---          | 79           | (1)        |    | TCGS |
| Ca      | ug/g   | 2000  |        | < 2000    |            | ---    | ---          | < 2000       |            |    | NAA  |
| Ce      | ug/g   | 9     |        | 9.18      | (1)        | ---    | ---          | 9.18         | (1)        |    | NAA  |
| Cl      | ug/g   | ---   |        | 1100      | (1)        | ---    | ---          | 1100         | (1)        |    | NAA  |
| Co      | ug/g   | 2.2   |        | 2.24      | (2)        | ---    | 2.22 - 2.26  | 2.24         | (2)        |    | NAA  |
| Cr      | ug/g   | 11    |        | 11.3      | (2)        | ---    | 11.02 - 11.5 | 11.26        | (2)        |    | NAA  |
| Cs      | ug/g   | 0.4   |        | 0.44      | (1)        | ---    | ---          | 0.44         | (1)        |    | NAA  |
| Dy      | ng/g   | ---   |        | < 700     |            | ---    | ---          | < 700        |            |    | NAA  |
| Eu      | ng/g   | 180   |        | 178       | (2)        | ---    | 177 - 180    | 178.5        | (2)        |    | NAA  |
| Fe      | ug/g   | 7600  |        | 7760      | (2)        | ---    | 7620 - 7900  | 7760         | (2)        |    | NAA  |
| Ga      | ug/g   | ---   |        | < 5       |            | ---    | ---          | < 5          |            |    | NAA  |
| H       | %      | 5     |        | 5.0       | (1)        | ---    | ---          | 5.0          | (1)        |    | TCGS |
| H2O-    | %      | 1.4   |        | ---       |            | ---    | ---          | ---          |            |    |      |
| HEAT    | btu/lb | 14060 | ± 60   | ---       |            | ---    | ---          | ---          |            |    |      |
| Hf      | ng/g   | 420   |        | 409       | (2)        | ---    | 400 - 418    | 409          | (2)        |    | NAA  |
| K       | ug/g   | 800   |        | 750       | (1)        | ---    | ---          | 750          | (1)        |    | NAA  |
| La      | ug/g   | 5.1   |        | 4.6       | (2)        | ---    | 4.2 - 5.05   | 4.62         | (2)        |    | NAA  |
| Lu      | ng/g   | ---   |        | 60        | (1)        | ---    | ---          | 60           | (1)        |    | NAA  |
| Mg      | ug/g   | 500   |        | ---       |            | ---    | ---          | ---          |            |    |      |
| Mn      | ug/g   | 13    |        | 11.8      | (1)        | ---    | ---          | 11.8         | (1)        |    | NAA  |
| Mo      | ug/g   | ---   |        | < 3       |            | ---    | ---          | < 3          |            |    | NAA  |
| N       | %      | 1.6   |        | 1.6       | (1)        | ---    | ---          | 1.6          | (1)        |    | TCGS |
| Na      | ug/g   | 500   |        | 500       | (1)        | ---    | ---          | 500          | (1)        |    | NAA  |
| Rb      | ug/g   | 5.3   |        | ---       |            | ---    | ---          | ---          |            |    |      |
| S       | %      | 1.85  | ± 0.06 | 1.89      | ± 0.05 (5) | 1.90   | 1.82 - 1.95  | 1.91         | ± 0.04 (3) |    | CB   |
| S       | %      | ---   |        | ---       |            | ---    | ---          | 1.90         | (1)        |    | IDMS |
| S       | %      | ---   |        | ---       |            | ---    | ---          | 1.82         | (1)        |    | TCGS |
| S-32/34 | ratio  | ---   |        | 22.364    | (1)        | ---    | ---          | 22.364       | (1)        |    | IDMS |
| S-33/34 | ratio  | ---   |        | 0.1769    | (1)        | ---    | ---          | 0.1769       | (1)        |    | IDMS |
| Sb      | ng/g   | 280   |        | 250       | (2)        | ---    | 220 - 279    | 250          | (2)        |    | NAA  |
| Sc      | ug/g   | 1.9   |        | 1.96      | (2)        | ---    | 1.94 - 1.99  | 1.97         | (2)        |    | NAA  |
| Se      | ug/g   | 1.2   |        | 1.22      | (2)        | ---    | 1.2 - 1.23   | 1.22         | (2)        |    | NAA  |
| Sm      | ug/g   | 0.86  |        | 0.86      | (1)        | ---    | ---          | 0.86         | (1)        |    | NAA  |
| Ta      | ng/g   | ---   |        | < 300     |            | ---    | ---          | < 300        |            |    | NAA  |
| Tb      | ng/g   | ---   |        | < 300     |            | ---    | ---          | < 300        |            |    | NAA  |
| Th      | ug/g   | 1.4   |        | 1.41      | (2)        | ---    | 1.36 - 1.45  | 1.41         | (2)        |    | NAA  |
| Ti      | ug/g   | 400   |        | 440       | (1)        | ---    | ---          | 440          | (1)        |    | NAA  |
| U       | ng/g   | 420   |        | 443       | ± 22 (3)   | 450    | 418 - 460    | 443          | ± 22 (3)   |    | NAA  |
| V       | ug/g   | 14    |        | 15.7      | (1)        | ---    | ---          | 15.7         | (1)        |    | NAA  |
| W       | ng/g   | 480   |        | 480       | (1)        | ---    | ---          | 480          | (1)        |    | NAA  |
| Yb      | ng/g   | ---   |        | 370       | (1)        | ---    | ---          | 370          | (1)        |    | NAA  |
| Zn      | ug/g   | 9.5   |        | 9.5       | (1)        | ---    | ---          | 9.5          | (1)        |    | NAA  |
| Zr      | ug/g   | ---   |        | < 90      |            | ---    | ---          | < 90         |            |    | NAA  |

TABLE 2683-2: INDIVIDUAL DATA FOR NBS SRM 2683 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| <                | 900   |     | ITNA   | 86GLA 01  | 11.02            | 0.18  |     | ITNA   | 83LIN 02  |
|                  |       |     |        |           | 11.5             | 0.4   |     | ITNA   | 86GLA 01  |
| <u>Al (ug/g)</u> |       |     |        |           | <u>Cs (ug/g)</u> |       |     |        |           |
| 8580             | 50    |     | ITNA   | 83LIN 02  | 0.44             | 0.02  |     | ITNA   | 83LIN 02  |
| 8600             | 200   |     | ITNA   | 86GLA 01  |                  |       |     |        |           |
| <u>As (ug/g)</u> |       |     |        |           | <u>Dy (ng/g)</u> |       |     |        |           |
| 3.64             | 0.13  |     | ITNA   | 83LIN 02  | <                | 700   |     | ITNA   | 86GLA 01  |
| 4                | 0.1   |     | ITNA   | 86GLA 01  |                  |       |     |        |           |
| <u>Au (ng/g)</u> |       |     |        |           | <u>Eu (ng/g)</u> |       |     |        |           |
| <                | 5     |     | ITNA   | 86GLA 01  | 177              | 6     |     | ITNA   | 83LIN 02  |
|                  |       |     |        |           | 180              | 12    |     | ITNA   | 86GLA 01  |
| <u>B (ug/g)</u>  |       |     |        |           | <u>Fe (ug/g)</u> |       |     |        |           |
| 67               | 2     |     | TCGS   | 83LIN 02  | 7620             | 190   |     | ITNA   | 83LIN 02  |
|                  |       |     |        |           | 7900             | 200   |     | ITNA   | 86GLA 01  |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Ga (ug/g)</u> |       |     |        |           |
| <                | 60    |     | ITNA   | 86GLA 01  | <                | 5     |     | ITNA   | 86GLA 01  |
| 71               | 3     |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>Br (ug/g)</u> |       |     |        |           | <u>H (%)</u>     |       |     |        |           |
| 16.85            | 0.04  |     | ITNA   | 83LIN 02  | 5                | 0.1   |     | TCGS   | 83LIN 02  |
| 17.8             | 0.6   |     | ITNA   | 86GLA 01  |                  |       |     |        |           |
| <u>C (%)</u>     |       |     |        |           | <u>Hf (ng/g)</u> |       |     |        |           |
| 79               | 4     |     | TCGS   | 83LIN 02  | 400              | 70    |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 418              | 4     |     | ITNA   | 83LIN 02  |
| <u>Ca (ug/g)</u> |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| <                | 2000  |     | ITNA   | 86GLA 01  | <                | 450   |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 750              | 10    |     | ITNA   | 83LIN 02  |
| <u>Ce (ug/g)</u> |       |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| 9.18             | 0.08  |     | ITNA   | 83LIN 02  | 4.2              | 0.2   |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 5.05             | 0.04  |     | ITNA   | 83LIN 02  |
| <u>Cl (ug/g)</u> |       |     |        |           | <u>Lu (ng/g)</u> |       |     |        |           |
| 1100             | 100   |     | ITNA   | 86GLA 01  | 60               | 7     |     | ITNA   | 86GLA 01  |
| <u>Co (ug/g)</u> |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 2.22             | 0.09  |     | ITNA   | 83LIN 02  | 11.8             | 0.2   |     | ITNA   | 86GLA 01  |
| 2.26             | 0.04  |     | ITNA   | 86GLA 01  |                  |       |     |        |           |

TABLE 2683-2: INDIVIDUAL DATA FOR NBS SRM 2683 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mo (ug/g)</u>       |       |     |        |           | <u>Sm (ug/g)</u> |       |     |        |           |
| <                      | 3     |     | ITNA   | 86GLA 01  | 0.859            | 0.005 |     | ITNA   | 83LIN 02  |
| <u>N (%)</u>           |       |     |        |           | <u>Ta (ng/g)</u> |       |     |        |           |
| 1.6                    | 0.9   |     | TCGS   | 83LIN 02  | <                | 300   |     | ITNA   | 86GLA 01  |
| <u>Na (ug/g)</u>       |       |     |        |           | <u>Tb (ng/g)</u> |       |     |        |           |
| 500                    | 30    |     | ITNA   | 86GLA 01  | <                | 300   |     | ITNA   | 86GLA 01  |
| <u>S (%)</u>           |       |     |        |           | <u>Th (ug/g)</u> |       |     |        |           |
| 1.82                   | 0.05  |     | TCGS   | 83LIN 02  | 1.363            | 0.011 |     | ITNA   | 83LIN 02  |
| 1.87                   | 0.03  |     | CB     | 84GLA 11  | 1.45             | 0.06  |     | ITNA   | 86GLA 01  |
| 1.896                  | 0.037 |     | IDMS   | 84KEL 01  | <u>Ti (ug/g)</u> |       |     |        |           |
| 1.91                   | 0.03  |     | CB     | 86GAU 01  | 440              | 90    |     | ITNA   | 86GLA 01  |
| 1.95                   | 0.04  |     | CB     | 85GLA 03  | <u>U (ng/g)</u>  |       |     |        |           |
| <u>S-32/34 (ratio)</u> |       |     |        |           | 418              | 11    |     | ITNA   | 83LIN 02  |
| 22.364                 |       |     | IDMS   | 84KEL 01  | 450              |       |     | DNA    | 86GAU 01  |
| <u>S-33/34 (ratio)</u> |       |     |        |           | 460              | 40    |     | DNA    | 86GLA 01  |
| 0.1769                 |       |     | IDMS   | 84KEL 01  | <u>V (ug/g)</u>  |       |     |        |           |
| <u>Sb (ng/g)</u>       |       |     |        |           | 15.7             | 0.9   |     | ITNA   | 86GLA 01  |
| 220                    | 20    |     | ITNA   | 86GLA 01  | <u>W (ng/g)</u>  |       |     |        |           |
| 279                    | 8     |     | ITNA   | 83LIN 02  | <                | 600   |     | ITNA   | 86GLA 01  |
| <u>Sc (ug/g)</u>       |       |     |        |           | 480              | 30    |     | ITNA   | 83LIN 02  |
| 1.941                  | 0.008 |     | ITNA   | 83LIN 02  | <u>Yb (ng/g)</u> |       |     |        |           |
| 1.99                   | 0.06  |     | ITNA   | 86GLA 01  | 370              | 60    |     | ITNA   | 86GLA 01  |
| <u>Se (ug/g)</u>       |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 1.2                    | 0.2   |     | ITNA   | 86GLA 01  | <                | 10    |     | ITNA   | 86GLA 01  |
| 1.23                   | 0.09  |     | ITNA   | 83LIN 02  | 9.5              | 0.6   |     | ITNA   | 83LIN 02  |
|                        |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
|                        |       |     |        |           | <                | 90    |     | ITNA   | 86GLA 01  |

TABLE 2684-1: COMPILED DATA FOR NBS SRM 2684 SULFUR IN COAL (revised 3/1/86)

| ELEMENT | UNITS  | NBS              | CONSENSUS       |     | MEDIAN | RANGE        | METHOD MEANS    |     |        |
|---------|--------|------------------|-----------------|-----|--------|--------------|-----------------|-----|--------|
|         |        | Mean $\pm$ SD    | Mean $\pm$ SD   | (n) |        |              | Mean $\pm$ SD   | (n) | Method |
| ASH     | %      | 11.09 $\pm$ 0.18 | ---             | --- | ---    | ---          | ---             | --- | ---    |
| Ag      | ng/g   | ---              | < 1200          | --- | ---    | < 1200       | ---             | --- | ---    |
| Al      | %      | 1.1              | 1.10            | (2) | ---    | 1.10 - 1.103 | 1.10            | (2) | NAA    |
| As      | ug/g   | 3.9              | 3.92            | (2) | ---    | 3.87 - 3.96  | 3.92            | (2) | NAA    |
| Au      | ng/g   | ---              | < 5             | --- | ---    | < 5          | ---             | --- | NAA    |
| B       | ug/g   | 114              | 114             | (1) | ---    | ---          | 114             | (1) | TCGS   |
| Ba      | ug/g   | 41               | 41.4            | (1) | ---    | ---          | 41.4            | (1) | NAA    |
| Br      | ug/g   | 11               | 10.4            | (2) | ---    | 10.2 - 10.6  | 10.4            | (2) | NAA    |
| C       | %      | 68               | 68              | (1) | ---    | ---          | 68              | (1) | TCGS   |
| Ca      | ug/g   | 4400             | 4800            | (1) | ---    | ---          | 4800            | (1) | NAA    |
| Ce      | ug/g   | 12               | 11.5            | (1) | ---    | ---          | 11.5            | (1) | NAA    |
| Cl      | ug/g   | ---              | 1050            | (1) | ---    | ---          | 1050            | (1) | NAA    |
| Co      | ug/g   | 3.9              | 3.72            | (2) | ---    | 3.6 - 3.85   | 3.72            | (2) | NAA    |
| Cr      | ug/g   | 17               | 16.6            | (2) | ---    | 16.4 - 16.8  | 16.6            | (2) | NAA    |
| Cs      | ug/g   | 1.2              | 1.15            | (1) | ---    | ---          | 1.15            | (1) | NAA    |
| Dy      | ug/g   | ---              | 0.96            | (1) | ---    | ---          | 0.96            | (1) | NAA    |
| Eu      | ng/g   | 230              | 226             | (2) | ---    | 226 - 226    | 226             | (2) | NAA    |
| Fe      | %      | 1.5              | 0.96            | (2) | ---    | 0.45 - 1.46  | 0.96            | (2) | NAA    |
| Ga      | ug/g   | ---              | < 5             | --- | ---    | < 5          | ---             | --- | NAA    |
| H       | %      | 4.8              | 4.8             | (1) | ---    | ---          | 4.8             | (1) | TCGS   |
| H2O-    | %      | 3.6              | ---             | --- | ---    | ---          | ---             | --- | ---    |
| HEAT    | btu/lb | 12760 $\pm$ 200  | ---             | --- | ---    | ---          | ---             | --- | ---    |
| Hf      | ng/g   | 570              | 568             | (2) | ---    | 565 - 570    | 568             | (2) | NAA    |
| K       | ug/g   | 2000             | 1850            | (2) | ---    | 1730 - 1969  | 1850            | (2) | NAA    |
| La      | ug/g   | 6.7              | 5.98            | (2) | ---    | 5.3 - 6.65   | 5.98            | (2) | NAA    |
| Lu      | ng/g   | ---              | 74              | (1) | ---    | ---          | 74              | (1) | NAA    |
| Mg      | ug/g   | 800              | ---             | --- | ---    | ---          | ---             | --- | ---    |
| Mn      | ug/g   | 36               | 32              | (1) | ---    | ---          | 32              | (1) | NAA    |
| Mo      | ug/g   | ---              | < 4             | --- | ---    | < 4          | ---             | --- | NAA    |
| N       | %      | 1.6              | 1.6             | (1) | ---    | ---          | 1.6             | (1) | TCGS   |
| Na      | ug/g   | 300              | 240             | (1) | ---    | ---          | 240             | (1) | NAA    |
| Rb      | ug/g   | 15               | 14.6            | (1) | ---    | ---          | 14.6            | (1) | NAA    |
| S       | %      | 3.00 $\pm$ 0.13  | 2.99 $\pm$ 0.06 | (4) | 2.95   | 2.94 - 3.08  | 2.94            | (1) | TCGS   |
| S       | %      | ---              | ---             | --- | ---    | ---          | 2.96            | (2) | CB     |
| S       | %      | ---              | ---             | --- | ---    | ---          | 3.08            | (1) | IDMS   |
| S-32/34 | ratio  | ---              | 22.726          | (1) | ---    | ---          | 22.726          | (1) | IDMS   |
| S-33/34 | ratio  | ---              | 0.1782          | (1) | ---    | ---          | 0.1782          | (1) | IDMS   |
| Sb      | ng/g   | 350              | 372             | (2) | ---    | 354 - 390    | 372             | (2) | NAA    |
| Sc      | ug/g   | 2.7              | 2.64            | (2) | ---    | 2.62 - 2.66  | 2.64            | (2) | NAA    |
| Se      | ug/g   | 1.9              | 1.82            | (2) | ---    | 1.77 - 1.87  | 1.82            | (2) | NAA    |
| Sm      | ug/g   | 1.1              | 1.11            | (1) | ---    | ---          | 1.11            | (1) | NAA    |
| Ta      | ng/g   | ---              | < 300           | --- | ---    | < 300        | ---             | --- | NAA    |
| Tb      | ng/g   | ---              | < 200           | --- | ---    | < 200        | ---             | --- | NAA    |
| Th      | ug/g   | 2                | 1.98            | (2) | ---    | 1.96 - 2.00  | 1.98            | (2) | NAA    |
| Ti      | ug/g   | 600              | 580             | (1) | ---    | ---          | 580             | (1) | NAA    |
| U       | ug/g   | 0.9              | 0.88 $\pm$ 0.02 | (3) | 0.88   | 0.87 - 0.90  | 0.88 $\pm$ 0.02 | (3) | NAA    |
| V       | ug/g   | 22               | 22              | (1) | ---    | ---          | 22              | (1) | NAA    |
| W       | ng/g   | 560              | 562             | (1) | ---    | ---          | 562             | (1) | NAA    |
| Yb      | ng/g   | ---              | 510             | (1) | ---    | ---          | 510             | (1) | NAA    |
| Zn      | ug/g   | 110              | 110             | (2) | ---    | 110 - 110    | 110             | (2) | NAA    |
| Zr      | ug/g   | ---              | < 120           | --- | ---    | < 120        | ---             | --- | NAA    |

TABLE 2684-2: INDIVIDUAL DATA FOR NBS SRM 2684 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| <                | 1200  |     | ITNA   | 86GLA 01  | 16.4             | 0.9   |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 16.8             | 0.3   |     | ITNA   | 83LIN 02  |
| <u>Al (%)</u>    |       |     |        |           | <u>Cs (ug/g)</u> |       |     |        |           |
| 1.1              | 0.04  |     | ITNA   | 86GLA 01  | 1.15             | 0.05  |     | ITNA   | 83LIN 02  |
| 1.103            | 0.006 |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>As (ug/g)</u> |       |     |        |           | <u>Dy (ug/g)</u> |       |     |        |           |
| 3.87             | 0.14  |     | ITNA   | 83LIN 02  | 0.96             | 0.06  |     | ITNA   | 86GLA 01  |
| 3.96             | 0.14  |     | ITNA   | 86GLA 01  |                  |       |     |        |           |
| <u>Au (ng/g)</u> |       |     |        |           | <u>Eu (ng/g)</u> |       |     |        |           |
| <                | 5     |     | ITNA   | 86GLA 01  | 226              | 9     |     | ITNA   | 83LIN 02  |
|                  |       |     |        |           | 226              | 20    |     | ITNA   | 86GLA 01  |
| <u>B (ug/g)</u>  |       |     |        |           | <u>Fe (%)</u>    |       |     |        |           |
| 114              | 3     |     | TCGS   | 83LIN 02  | 0.454            | 0.026 |     | ITNA   | 83LIN 02  |
|                  |       |     |        |           | 1.46             | 0.04  |     | ITNA   | 86GLA 01  |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Ga (ug/g)</u> |       |     |        |           |
| <                | 80    |     | ITNA   | 86GLA 01  |                  |       |     |        |           |
| 41.4             | 2.6   |     | ITNA   | 83LIN 02  | <                | 5     |     | ITNA   | 86GLA 01  |
| <u>Br (ug/g)</u> |       |     |        |           | <u>H (%)</u>     |       |     |        |           |
| 10.2             | 0.2   |     | ITNA   | 86GLA 01  | 4.8              | 0.1   |     | TCGS   | 83LIN 02  |
| 10.6             | 0.5   |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>C (%)</u>     |       |     |        |           | <u>Hf (ng/g)</u> |       |     |        |           |
| 68               | 2     |     | TCGS   | 83LIN 02  | 565              | 12    |     | ITNA   | 83LIN 02  |
|                  |       |     |        |           | 570              | 7     |     | ITNA   | 86GLA 01  |
| <u>Ca (ug/g)</u> |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| 4800             | 400   |     | ITNA   | 86GLA 01  | 1730             | 140   |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 1969             | 16    |     | ITNA   | 83LIN 02  |
| <u>Ce (ug/g)</u> |       |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| 11.5             | 0.2   |     | ITNA   | 83LIN 02  | 5.3              | 0.13  |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 6.65             | 0.1   |     | ITNA   | 83LIN 02  |
| <u>Cl (ug/g)</u> |       |     |        |           | <u>Lu (ng/g)</u> |       |     |        |           |
| 1050             | 100   |     | ITNA   | 86GLA 01  | 74               | 5     |     | ITNA   | 86GLA 01  |
| <u>Co (ug/g)</u> |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 3.6              | 0.2   |     | ITNA   | 86GLA 01  | 32               | 0.2   |     | ITNA   | 86GLA 01  |
| 3.85             | 0.05  |     | ITNA   | 83LIN 02  |                  |       |     |        |           |

TABLE 2684-2: INDIVIDUAL DATA FOR NBS SRM 2684 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mo (ug/g)</u>       |       |     |        |           | <u>Tb (ng/g)</u> |       |     |        |           |
| <                      | 4     |     | ITNA   | 86GLA 01  | <                | 200   |     | ITNA   | 86GLA 01  |
| <u>N (%)</u>           |       |     |        |           | <u>Th (ug/g)</u> |       |     |        |           |
| 1.6                    | 0.4   |     | TCGS   | 83LIN 02  | 1.955            | 0.016 |     | ITNA   | 83LIN 02  |
|                        |       |     |        |           | 2                | 0.08  |     | ITNA   | 86GLA 01  |
| <u>Na (ug/g)</u>       |       |     |        |           | <u>Ti (ug/g)</u> |       |     |        |           |
| 240                    | 20    |     | ITNA   | 86GLA 01  | 580              | 60    |     | ITNA   | 86GLA 01  |
| <u>Rb (ug/g)</u>       |       |     |        |           | <u>U (ug/g)</u>  |       |     |        |           |
| 14.6                   | 1.1   |     | ITNA   | 83LIN 02  | 0.87             | 0.02  |     | DNA    | 86GLA 01  |
| <u>S (%)</u>           |       |     |        |           | 0.88             |       |     | DNA    | 86GAU 01  |
| 2.94                   | 0.07  |     | TCGS   | 83LIN 02  | 0.901            | 0.01  |     | ITNA   | 83LIN 02  |
| 2.95                   | 0.03  |     | CB     | 86GAU 01  | <u>V (ug/g)</u>  |       |     |        |           |
| 2.98                   | 0.08  |     | CB     | 85GLA 03  | 22               | 4     |     | ITNA   | 86GLA 01  |
| 3.076                  | 0.09  |     | IDMS   | 84KEL 01  | <u>W (ng/g)</u>  |       |     |        |           |
| <u>S-32/34 (ratio)</u> |       |     |        |           | <                | 700   |     | ITNA   | 86GLA 01  |
| 22.726                 |       |     | IDMS   | 84KEL 01  | 562              | 22    |     | ITNA   | 83LIN 02  |
| <u>S-33/34 (ratio)</u> |       |     |        |           | <u>Yb (ng/g)</u> |       |     |        |           |
| 0.1782                 |       |     | IDMS   | 84KEL 01  | 510              | 50    |     | ITNA   | 86GLA 01  |
| <u>Sb (ng/g)</u>       |       |     |        |           | <u>Zn (ug/g)</u> |       |     |        |           |
| 354                    | 8     |     | ITNA   | 83LIN 02  | 110              | 11    |     | ITNA   | 86GLA 01  |
| 390                    | 50    |     | ITNA   | 86GLA 01  | 110              | 12    |     | ITNA   | 83LIN 02  |
| <u>Sc (ug/g)</u>       |       |     |        |           | <u>Zr (ug/g)</u> |       |     |        |           |
| 2.62                   | 0.1   |     | ITNA   | 86GLA 01  | <                | 120   |     | ITNA   | 86GLA 01  |
| 2.665                  | 0.02  |     | ITNA   | 83LIN 02  | <u>Se (ug/g)</u> |       |     |        |           |
| <u>Se (ug/g)</u>       |       |     |        |           | 1.77             | 0.13  |     | ITNA   | 86GLA 01  |
|                        |       |     |        |           | 1.87             | 0.16  |     | ITNA   | 83LIN 02  |
| <u>Sm (ug/g)</u>       |       |     |        |           | <u>Ta (ng/g)</u> |       |     |        |           |
| 1.109                  | 0.012 |     | ITNA   | 83LIN 02  | <                | 300   |     | ITNA   | 86GLA 01  |

TABLE 2685-1: COMPILED DATA FOR NBS SRM 2685 SULFUR IN COAL (revised 3/1/86)

| ELEMENT | UNITS  | NBS   |        | CONSENSUS |             | MEDIAN | RANGE        | METHOD MEANS |             |      |
|---------|--------|-------|--------|-----------|-------------|--------|--------------|--------------|-------------|------|
|         |        | Mean  | SD     | Mean      | SD          |        |              | (n)          | Mean        | SD   |
| ASH     | %      | 16.53 | ± 0.15 | ---       |             | ---    | ---          | ---          |             |      |
| Ag      | ng/g   | ---   |        | < 1500    |             | ---    | ---          | < 1500       |             | NAA  |
| Al      | %      | 1.7   |        | 1.66      | (2)         | ---    | 1.64 - 1.67  | 1.65         | (2)         | NAA  |
| As      | ug/g   | 12    |        | 12.6      | (2)         | ---    | 12.3 - 12.9  | 12.6         | (2)         | NAA  |
| Au      | ng/g   | ---   |        | < 6       |             | ---    | ---          | < 6          |             | NAA  |
| B       | ug/g   | 109   |        | 109       | (1)         | ---    | ---          | 109          | (1)         | TCGS |
| Ba      | ug/g   | 105   |        | 105       | (1)         | ---    | ---          | 105          | (1)         | NAA  |
| Br      | ug/g   | 5.6   |        | 5.84      | (2)         | ---    | 5.57 - 6.1   | 5.84         | (2)         | NAA  |
| C       | %      | 66    |        | 66        | (1)         | ---    | ---          | 66           | (1)         | TCGS |
| Ca      | ug/g   | 5200  |        | 5600      | (1)         | ---    | ---          | 5600         | (1)         | NAA  |
| Ce      | ug/g   | 18    |        | 17.9      | (1)         | ---    | ---          | 17.9         | (1)         | NAA  |
| Cl      | ug/g   | ---   |        | 520       | (1)         | ---    | ---          | 520          | (1)         | NAA  |
| Co      | ug/g   | 4.6   |        | 4.58      | (2)         | ---    | 4.57 - 4.6   | 4.58         | (2)         | NAA  |
| Cr      | ug/g   | 22    |        | 22.4      | (2)         | ---    | 22.3 - 22.6  | 22.4         | (2)         | NAA  |
| Cs      | ug/g   | 1.3   |        | 1.31      | (1)         | ---    | ---          | 1.31         | (1)         | NAA  |
| Dy      | ug/g   | ---   |        | 1.35      | (1)         | ---    | ---          | 1.35         | (1)         | NAA  |
| Eu      | ng/g   | 360   |        | 344       | (2)         | ---    | 330 - 357    | 344          | (2)         | NAA  |
| Fe      | %      | 2.9   |        | 2.45      | (2)         | ---    | 2.40 - 2.51  | 2.45         | (2)         | NAA  |
| Ga      | ug/g   | ---   |        | < 7       |             | ---    | ---          | < 7          |             | NAA  |
| H       | %      | 4.6   |        | 4.6       | (1)         | ---    | ---          | 4.6          | (1)         | TCGS |
| H2O-    | %      | 1.8   |        | ---       |             | ---    | ---          | ---          |             |      |
| HEAT    | btu/lb | 12100 | ± 180  | ---       |             | ---    | ---          | ---          |             |      |
| Hf      | ug/g   | 0.91  |        | 0.93      | (2)         | ---    | 0.913 - 0.94 | 0.93         | (2)         | NAA  |
| K       | ug/g   | 2600  |        | 2421      | (2)         | ---    | 2250 - 2592  | 2421         | (2)         | NAA  |
| La      | ug/g   | 10    |        | 9.4       | (2)         | ---    | 8.6 - 10.2   | 9.4          | (2)         | NAA  |
| Lu      | ng/g   | ---   |        | 116       | (1)         | ---    | ---          | 116          | (1)         | NAA  |
| Mg      | ug/g   | 1000  |        | ---       |             | ---    | ---          | ---          |             |      |
| Mn      | ug/g   | 41    |        | 38        | (1)         | ---    | ---          | 38           | (1)         | NAA  |
| Mo      | ug/g   | ---   |        | < 5       |             | ---    | ---          | < 5          |             | NAA  |
| N       | %      | 1.1   |        | 1.1       | (1)         | ---    | ---          | 1.1          | (1)         | TCGS |
| Na      | ug/g   | 800   |        | 755       | (1)         | ---    | ---          | 755          | (1)         | NAA  |
| Rb      | ug/g   | 17    |        | 16.8      | (1)         | ---    | ---          | 16.8         | (1)         | NAA  |
| S       | %      | 4.62  | ± 0.18 | 4.68      | ± 0.06 (4)  | 4.64   | 4.62 - 4.76  | 4.66         | (2)         | CB   |
| S       | %      | ---   |        | ---       |             | ---    | ---          | 4.64         | (1)         | TCGS |
| S       | %      | ---   |        | ---       |             | ---    | ---          | 4.76         | (1)         | IDMS |
| S-32/34 | ratio  | ---   |        | 22.546    | (1)         | ---    | ---          | 22.546       | (1)         | IDMS |
| S-33/34 | ratio  | ---   |        | 0.1777    | (1)         | ---    | ---          | 0.1777       | (1)         | IDMS |
| Sb      | ng/g   | 360   |        | 363       | (2)         | ---    | 357 - 370    | 363          | (2)         | NAA  |
| Sc      | ug/g   | 3.7   |        | 3.72      | (2)         | ---    | 3.7 - 3.73   | 3.72         | (2)         | NAA  |
| Se      | ug/g   | 1.9   |        | 1.91      | (1)         | ---    | ---          | 1.91         | (1)         | NAA  |
| Sm      | ug/g   | 1.7   |        | 1.73      | (1)         | ---    | ---          | 1.73         | (1)         | NAA  |
| Ta      | ng/g   | ---   |        | 240       | (1)         | ---    | ---          | 240          | (1)         | NAA  |
| Tb      | ng/g   | ---   |        | < 200     |             | ---    | ---          | < 200        |             | NAA  |
| Th      | ug/g   | 2.7   |        | 2.66      | (2)         | ---    | 2.65 - 2.66  | 2.66         | (2)         | NAA  |
| Ti      | ug/g   | 900   |        | 910       | (1)         | ---    | ---          | 910          | (1)         | NAA  |
| U       | ug/g   | 0.95  |        | 0.957     | ± 0.012 (3) | 0.952  | 0.948 - 0.97 | 0.957        | ± 0.012 (3) | NAA  |
| V       | ug/g   | 31    |        | 31        | (1)         | ---    | ---          | 31           | (1)         | NAA  |
| W       | ug/g   | 1.2   |        | 1.18      | (1)         | ---    | ---          | 1.18         | (1)         | NAA  |
| Yb      | ng/g   | ---   |        | 660       | (1)         | ---    | ---          | 660          | (1)         | NAA  |
| Zn      | ug/g   | 17    |        | 17.1      | (1)         | ---    | ---          | 17.1         | (1)         | NAA  |
| Zr      | ug/g   | ---   |        | < 150     |             | ---    | ---          | < 150        |             | NAA  |

TABLE 2685-2: INDIVIDUAL DATA FOR NBS SRM 2685 (revised 3/1/86)

| Conc             | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Ag (ng/g)</u> |       |     |        |           | <u>Cr (ug/g)</u> |       |     |        |           |
| <                | 1500  |     | ITNA   | 86GLA 01  | 22.3             | 0.4   |     | ITNA   | 83LIN 02  |
|                  |       |     |        |           | 22.6             | 0.8   |     | ITNA   | 86GLA 01  |
| <u>Al (%)</u>    |       |     |        |           | <u>Cs (ug/g)</u> |       |     |        |           |
| 1.64             | 0.04  |     | ITNA   | 86GLA 01  | 1.31             | 0.07  |     | ITNA   | 83LIN 02  |
| 1.669            | 0.007 |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>As (ug/g)</u> |       |     |        |           | <u>Dy (ug/g)</u> |       |     |        |           |
| 12.28            | 0.38  |     | ITNA   | 83LIN 02  | 1.35             | 0.11  |     | ITNA   | 86GLA 01  |
| 12.9             | 0.6   |     | ITNA   | 86GLA 01  |                  |       |     |        |           |
| <u>Au (ng/g)</u> |       |     |        |           | <u>Eu (ng/g)</u> |       |     |        |           |
| <                | 6     |     | ITNA   | 86GLA 01  | 330              | 40    |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 357              | 4     |     | ITNA   | 83LIN 02  |
| <u>B (ug/g)</u>  |       |     |        |           | <u>Fe (%)</u>    |       |     |        |           |
| 109              | 5     |     | TCGS   | 83LIN 02  | 2.396            | 0.065 |     | ITNA   | 83LIN 02  |
|                  |       |     |        |           | 2.51             | 0.16  |     | ITNA   | 86GLA 01  |
| <u>Ba (ug/g)</u> |       |     |        |           | <u>Ga (ug/g)</u> |       |     |        |           |
| <                | 80    |     | ITNA   | 86GLA 01  | <                | 7     |     | ITNA   | 86GLA 01  |
| 105              | 6     |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>Br (ug/g)</u> |       |     |        |           | <u>H (%)</u>     |       |     |        |           |
| 5.57             | 0.07  |     | ITNA   | 83LIN 02  | 4.6              | 0.2   |     | TCGS   | 83LIN 02  |
| 6.1              | 0.5   |     | ITNA   | 86GLA 01  |                  |       |     |        |           |
| <u>C (%)</u>     |       |     |        |           | <u>Hf (ug/g)</u> |       |     |        |           |
| 66               | 3     |     | TCGS   | 83LIN 02  | 0.913            | 0.011 |     | ITNA   | 83LIN 02  |
|                  |       |     |        |           | 0.94             | 0.005 |     | ITNA   | 86GLA 01  |
| <u>Ca (ug/g)</u> |       |     |        |           | <u>K (ug/g)</u>  |       |     |        |           |
| 5600             | 600   |     | ITNA   | 86GLA 01  | 2250             | 200   |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 2592             | 45    |     | ITNA   | 83LIN 02  |
| <u>Ce (ug/g)</u> |       |     |        |           | <u>La (ug/g)</u> |       |     |        |           |
| 17.88            | 0.18  |     | ITNA   | 83LIN 02  | 8.6              | 0.4   |     | ITNA   | 86GLA 01  |
|                  |       |     |        |           | 10.19            | 0.11  |     | ITNA   | 83LIN 02  |
| <u>Cl (ug/g)</u> |       |     |        |           | <u>Lu (ng/g)</u> |       |     |        |           |
| 520              | 40    |     | ITNA   | 86GLA 01  | 116              | 30    |     | ITNA   | 86GLA 01  |
| <u>Co (ug/g)</u> |       |     |        |           | <u>Mn (ug/g)</u> |       |     |        |           |
| 4.57             | 0.06  |     | ITNA   | 83LIN 02  | 38               | 1     |     | ITNA   | 86GLA 01  |
| 4.6              | 0.2   |     | ITNA   | 86GLA 01  |                  |       |     |        |           |

TABLE 2685-2: INDIVIDUAL DATA FOR NBS SRM 2685 (cont.)

| Conc                   | Uncer | Com | Method | Reference | Conc             | Uncer | Com | Method | Reference |
|------------------------|-------|-----|--------|-----------|------------------|-------|-----|--------|-----------|
| <u>Mo (ug/g)</u>       |       |     |        |           | <u>Tb (ng/g)</u> |       |     |        |           |
| <                      | 5     |     | ITNA   | 86GLA 01  | <                | 200   |     | ITNA   | 86GLA 01  |
| <u>N (%)</u>           |       |     |        |           | <u>Th (ug/g)</u> |       |     |        |           |
| 1.1                    | 0.3   |     | TCGS   | 83LIN 02  | 2.65             | 0.1   |     | ITNA   | 86GLA 01  |
| <u>Na (ug/g)</u>       |       |     |        |           | 2.66             | 0.03  |     | ITNA   | 83LIN 02  |
| 755                    | 50    |     | ITNA   | 86GLA 01  | <u>Ti (ug/g)</u> |       |     |        |           |
| <u>Rb (ug/g)</u>       |       |     |        |           | 910              | 80    |     | ITNA   | 86GLA 01  |
| 16.8                   | 1.3   |     | ITNA   | 83LIN 02  | <u>U (ug/g)</u>  |       |     |        |           |
| <u>S (%)</u>           |       |     |        |           | 0.948            | 0.013 |     | ITNA   | 83LIN 02  |
| 4.62                   | 0.07  |     | CB     | 85GLA 03  | 0.952            | 0.005 |     | DNA    | 86GLA 01  |
| 4.64                   | 0.19  |     | TCGS   | 83LIN 02  | 0.97             |       |     | DNA    | 86GAU 01  |
| 4.7                    | 0.02  |     | CB     | 86GAU 01  | <u>V (ug/g)</u>  |       |     |        |           |
| 4.76                   | 0.19  |     | IDMS   | 84KEL 01  | 31               | 1     |     | ITNA   | 86GLA 01  |
| <u>s-32/34 (ratio)</u> |       |     |        |           | <u>W (ug/g)</u>  |       |     |        |           |
| 22.546                 |       |     | IDMS   | 84KEL 01  | <                | 1.5   |     | ITNA   | 86GLA 01  |
| <u>s-33/34 (ratio)</u> |       |     |        |           | 1.18             | 0.06  |     | ITNA   | 83LIN 02  |
| 0.1777                 |       |     | IDMS   | 84KEL 01  | <u>Yb (ng/g)</u> |       |     |        |           |
| <u>Sb (ng/g)</u>       |       |     |        |           | 660              | 120   |     | ITNA   | 86GLA 01  |
| 357                    | 12    |     | ITNA   | 83LIN 02  | <u>Zn (ug/g)</u> |       |     |        |           |
| 370                    | 30    |     | ITNA   | 86GLA 01  | <                | 10    |     | ITNA   | 86GLA 01  |
| <u>Sc (ug/g)</u>       |       |     |        |           | 17.1             | 1.1   |     | ITNA   | 83LIN 02  |
| 3.7                    | 0.019 |     | ITNA   | 83LIN 02  | <u>Zr (ug/g)</u> |       |     |        |           |
| 3.73                   | 0.13  |     | ITNA   | 86GLA 01  | <                | 150   |     | ITNA   | 86GLA 01  |
| <u>Se (ug/g)</u>       |       |     |        |           |                  |       |     |        |           |
| <                      | 3     |     | ITNA   | 86GLA 01  |                  |       |     |        |           |
| 1.91                   | 0.16  |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>Sm (ug/g)</u>       |       |     |        |           |                  |       |     |        |           |
| 1.729                  | 0.007 |     | ITNA   | 83LIN 02  |                  |       |     |        |           |
| <u>Ta (ng/g)</u>       |       |     |        |           |                  |       |     |        |           |
| 240                    | 70    |     | ITNA   | 86GLA 01  |                  |       |     |        |           |

TABLE 2689-1: COMPILED DATA FOR NBS SRMs 2689-2691 FLY ASH (revised 3/1/87)

| ELEMENT | UNITS | NBS   |       |       |
|---------|-------|-------|-------|-------|
|         |       | 2689  | 2690  | 2691  |
|         |       | Mean  | Mean  | Mean  |
| Al      | %     | 12.94 | 12.35 | 9.81  |
| Ba      | ug/g  | 800   | 6500  | 6600  |
| Ca      | %     | 2.18  | 5.71  | 18.45 |
| Fe      | %     | 9.32  | 3.57  | 4.42  |
| H2O-    | %     | 0.14  | 0.12  | 0.08  |
| K       | %     | 2.14  | 1.00  | 0.33  |
| LOI     | %     | 1.76  | 0.53  | 0.23  |
| Mg      | %     | 0.61  | 1.53  | 3.12  |
| Mn      | ug/g  | 300   | 300   | 200   |
| Na      | %     | 0.25  | 0.24  | 1.09  |
| P       | ug/g  | 1000  | 5200  | 5100  |
| S       | ug/g  | ---   | 1500  | 8300  |
| Si      | %     | 24.06 | 25.85 | 16.83 |
| Sr      | ug/g  | 700   | 2000  | 2700  |
| Ti      | ug/g  | 7500  | 5200  | 9000  |

TABLE 2694-1: COMPILED DATA FOR NBS SRM 2694 SIMULATED RAINWATER (revised 3/1/87)

| PARAMETER    | UNITS | NBS           |               |
|--------------|-------|---------------|---------------|
|              |       | I             | II            |
|              |       | Mean ± SD     | Mean ± SD     |
| Acidity      | meq/L | 0.050 ± 0.002 | 0.284 ± 0.005 |
| Ca           | ug/L  | 14 ± 3        | 49 ± 11       |
| Cl           | mg/L  | 0.24          | 1.0           |
| Conductivity | uS/cm | 26 ± 2        | 130 ± 2       |
| F            | ug/L  | 54 ± 2        | 98 ± 7        |
| K            | ug/L  | 52 ± 7        | 106 ± 8       |
| Mg           | ug/L  | 24 ± 2        | 51 ± 3        |
| Na           | ug/L  | 205 ± 9       | 419 ± 15      |
| NH4-N        | mg/L  | ---           | 1.0           |
| NO3-N        | mg/L  | ---           | 7.06 ± 0.15   |
| pH           | units | 4.27 ± 0.03   | 3.59 ± 0.02   |
| SO4          | mg/L  | 2.75 ± 0.05   | 10.9 ± 0.2    |

TABLE 4350-1: COMPILED DATA FOR NBS SRM 4350 ENVIRONMENTAL RADIOACTIVITY STANDARD, RIVER SEDIMENT (revised 3/1/86)  
(Activities shown as of 1 January 1975)

| NUCLIDE | UNITS | NBS<br>Mean $\pm$ SD | CONSENSUS<br>Mean $\pm$ SD (n) | MEDIAN | RANGE      | METHOD |
|---------|-------|----------------------|--------------------------------|--------|------------|--------|
| Ac-228  | pCi/g | 0.92 $\pm$ 0.18      | ---                            | ---    | ---        | ---    |
| Ac-228  | mBq/g | 34 $\pm$ 6.5         | ---                            | ---    | ---        | ---    |
| Am-241  | pCi/g | 0.0084               | < 0.007                        | ---    | ---        | GAMMA  |
| Am-241  | mBq/g | 0.314                | ---                            | ---    | ---        | ---    |
| Bi-212  | mBq/g | 50                   | ---                            | ---    | ---        | ---    |
| Bi-212  | pCi/g | 1.4                  | ---                            | ---    | ---        | ---    |
| Bi-214  | mBq/g | 34                   | ---                            | ---    | ---        | ---    |
| Bi-214  | pCi/g | 0.92                 | ---                            | ---    | ---        | ---    |
| Cm-244  | mBq/g | 0.0015               | ---                            | ---    | ---        | ---    |
| Co-60   | pCi/g | 4.00 $\pm$ 0.22      | ---                            | ---    | ---        | ---    |
| Co-60   | mBq/g | 148 $\pm$ 8          | ---                            | ---    | ---        | ---    |
| Cs-137  | pCi/g | 2.7 $\pm$ 0.12       | 2.83 $\pm$ 0.30 (4)            | 2.7    | 2.5 - 3.18 | GAMMA  |
| Cs-137  | mBq/g | 100 $\pm$ 4.5        | ---                            | ---    | ---        | ---    |
| Eu-152  | pCi/g | 6.5 $\pm$ 0.38       | 7.11 (1)                       | ---    | ---        | GAMMA  |
| Eu-152  | mBq/g | 240 $\pm$ 14         | ---                            | ---    | ---        | ---    |
| Eu-154  | pCi/g | 1.4 $\pm$ 0.1        | 1.17 (1)                       | ---    | ---        | GAMMA  |
| Eu-154  | mBq/g | 52 $\pm$ 4           | ---                            | ---    | ---        | ---    |
| Eu-155  | pCi/g | 0.38                 | ---                            | ---    | ---        | ---    |
| Eu-155  | mBq/g | 14                   | ---                            | ---    | ---        | ---    |
| Fe-55   | pCi/g | 43                   | ---                            | ---    | ---        | ---    |
| Fe-55   | mBq/g | 1600                 | ---                            | ---    | ---        | ---    |
| I       | ng/g  | ---                  | 5400 (1)                       | ---    | ---        | NAA    |
| I-129   | FCI/G | ---                  | 0.032 (1)                      | ---    | ---        | NAA    |
| K-40    | pCi/g | 14.6 $\pm$ 1.3       | 15.2 (1)                       | ---    | ---        | GAMMA  |
| K-40    | mBq/g | 540 $\pm$ 50         | ---                            | ---    | ---        | ---    |
| Mn-54   | pCi/g | 0.057 $\pm$ 0.007    | ---                            | ---    | ---        | ---    |
| Mn-54   | mBq/g | 2.1 $\pm$ 0.2        | ---                            | ---    | ---        | ---    |
| Pa-231  | pCi/g | 0.047                | ---                            | ---    | ---        | ---    |
| Pa-231  | mBq/g | 1.75                 | ---                            | ---    | ---        | ---    |
| Pb-212  | pCi/g | 1.6                  | ---                            | ---    | ---        | ---    |
| Pb-212  | mBq/g | 60                   | ---                            | ---    | ---        | ---    |
| Pb-214  | pCi/g | 1.1                  | ---                            | ---    | ---        | ---    |
| Pb-214  | mBq/g | 41                   | ---                            | ---    | ---        | ---    |
| Pu-238  | pCi/g | 0.002                | ---                            | ---    | ---        | ---    |
| Pu-238  | mBq/g | 0.067                | ---                            | ---    | ---        | ---    |
| Pu-239  | pCi/g | 0.038 $\pm$ 0.003    | 0.033 (1)                      | ---    | ---        | AS     |
| Pu-239  | mBq/g | 1.4 $\pm$ 0.12       | ---                            | ---    | ---        | ---    |
| Ra-226  | pCi/g | 0.84                 | ---                            | ---    | ---        | ---    |
| Ra-226  | mBq/g | 31                   | ---                            | ---    | ---        | ---    |
| Sb-125  | pCi/g | 0.095                | ---                            | ---    | ---        | ---    |
| Sb-125  | mBq/g | 3.5                  | ---                            | ---    | ---        | ---    |
| Sr-90   | pCi/g | 0.278 $\pm$ 0.042    | ---                            | ---    | ---        | ---    |
| Sr-90   | mBq/g | 10.3 $\pm$ 1.6       | ---                            | ---    | ---        | ---    |
| Th-228  | pCi/g | 1.07                 | ---                            | ---    | ---        | ---    |
| Th-228  | mBq/g | 39.5                 | ---                            | ---    | ---        | ---    |
| Th-230  | pCi/g | 0.988                | ---                            | ---    | ---        | ---    |
| Th-230  | mBq/g | 36.6                 | ---                            | ---    | ---        | ---    |

TABLE 4350-1: COMPILED DATA FOR NBS SRM 4350 ENVIRONMENTAL RADIOACTIVITY STANDARD, RIVER SEDIMENT (cont.)

| NUCLIDE | UNITS | NBS          |    | CONSENSUS |        | MEDIAN | RANGE | METHOD |
|---------|-------|--------------|----|-----------|--------|--------|-------|--------|
|         |       | Mean ±       | SD | Mean ±    | SD (n) |        |       |        |
| Th-232  | pCi/g | 0.84         |    | ---       |        | ---    | ---   | ---    |
| Th-232  | mBq/g | 34.4         |    | ---       |        | ---    | ---   | ---    |
| Tl-208  | pCi/g | 0.38         |    | ---       |        | ---    | ---   | ---    |
| Tl-208  | mBq/g | 14           |    | ---       |        | ---    | ---   | ---    |
| U       | ug/g  | ---          |    | 0.9       | (1)    | ---    | ---   | NAA    |
| U-234   | pCi/g | 1.34         |    | ---       |        | ---    | ---   | ---    |
| U-234   | mBq/g | 49.6         |    | ---       |        | ---    | ---   | ---    |
| U-235   | pCi/g | 0.05         |    | ---       |        | ---    | ---   | ---    |
| U-235   | mBq/g | 1.85         |    | ---       |        | ---    | ---   | ---    |
| U-238   | pCi/g | 1.14         |    | ---       |        | ---    | ---   | ---    |
| U-238   | mBq/g | 42.2         |    | ---       |        | ---    | ---   | ---    |
| Zn-65   | pCi/g | 0.35 ± 0.047 |    | ---       |        | ---    | ---   | ---    |
| Zn-65   | mBq/g | 13 ± 1.8     |    | ---       |        | ---    | ---   | ---    |

TABLE 4350-2: INDIVIDUAL DATA FOR NBS SRM 4350 (revised 3/1/86)

| Conc                  | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Am-241 (pCi/g)</u> |       |     |        |           | <u>I (ng/g)</u>       |       |     |        |           |
| <                     | 0.007 |     | GAMMA  | 86GAU 01  | 5400                  | 5000  |     | RTNA   | 79BRA 01  |
| <u>Cs-137 (pCi/g)</u> |       |     |        |           | <u>I-129 (fCi/g)</u>  |       |     |        |           |
| 2.5                   | 0.35  |     | GAMMA  | 84GLA 02  | 0.032                 | 0.037 |     | RTNA   | 79BRA 01  |
| 2.7                   | 0.2   |     | GAMMA  | 86GAU 01  | <u>K-40 (pCi/g)</u>   |       |     |        |           |
| 2.95                  | 0.18  |     | GAMMA  | 85GAU 04  | 15.2                  |       |     | GAMMA  | 86GAU 01  |
| 3.18                  |       |     | GAMMA  | 84GLA 11  | <u>Pu-239 (pCi/g)</u> |       |     |        |           |
| <u>Eu-152 (pCi/g)</u> |       |     |        |           | 0.033                 | 0.001 |     | AS     | 81CAR 01  |
| 7.11                  |       |     | GAMMA  | 84GLA 11  | <u>U (ug/g)</u>       |       |     |        |           |
| <u>Eu-154 (pCi/g)</u> |       |     |        |           | 0.9                   |       |     | DNA    | 84GLA 11  |
| 1.17                  |       |     | GAMMA  | 84GLA 11  |                       |       |     |        |           |

TABLE 4350B-1: COMPILED DATA FOR NBS SRM 4350B ENVIRONMENTAL RADIOACTIVITY, RIVER SEDIMENT (revised 3/1/86)  
(Activity as of 9 September 1981)

| NUCLIDE | UNITS | NBS      |        | CONSENSUS |       |     | MEDIAN | RANGE           | METHOD |
|---------|-------|----------|--------|-----------|-------|-----|--------|-----------------|--------|
|         |       | Mean ±   | SD     | Mean ±    | SD    | (n) |        |                 |        |
| Ac-228  | pCi/g | ---      |        | 1.2       |       | (1) | ---    | ---             | GAMMA  |
| Am-241  | pCi/g | 0.0040 ± | 0.0008 | 0.005     |       | (1) | ---    | ---             | AS     |
| Am-241  | mBq/g | 0.15 ±   | 0.03   | ---       |       |     | ---    | ---             | ---    |
| Co-60   | pCi/g | 0.125 ±  | 0.006  | 0.12      |       | (2) | ---    | 0.11 - 0.13     | GAMMA  |
| Co-60   | mBq/g | 4.64 ±   | 0.23   | ---       |       |     | ---    | ---             | ---    |
| Cs-137  | pCi/g | 0.783 ±  | 0.049  | 0.842 ±   | 0.070 | (5) | 0.81   | 0.79 - 0.96     | GAMMA  |
| Cs-137  | mBq/g | 29.0 ±   | 1.8    | ---       |       |     | ---    | ---             | ---    |
| Eu-152  | pCi/g | 0.824 ±  | 0.033  | 1.16      |       | (1) | ---    | ---             | GAMMA  |
| Eu-152  | mBq/g | 30.5 ±   | 1.2    | ---       |       |     | ---    | ---             | ---    |
| Eu-154  | pCi/g | 0.102 ±  | 0.015  | < 0.3     |       |     | ---    | ---             | GAMMA  |
| Eu-154  | mBq/g | 3.78 ±   | 0.57   | ---       |       |     | ---    | ---             | ---    |
| Fe-55   | pCi/g | 0.46     |        | ---       |       |     | ---    | ---             | ---    |
| Fe-55   | mBq/g | 17       |        | ---       |       |     | ---    | ---             | ---    |
| K-40    | pCi/g | 15       |        | 15.13     |       | (1) | ---    | ---             | GAMMA  |
| K-40    | mBq/g | 560      |        | ---       |       |     | ---    | ---             | ---    |
| Pu-238  | FCI/G | 0.35 ±   | 0.06   | 0.2       |       | (1) | ---    | ---             | AS     |
| Pu-238  | mBq/g | 0.013 ±  | 0.002  | ---       |       |     | ---    | ---             | ---    |
| Pu-239  | pCi/g | 0.0137 ± | 0.0008 | 0.0133    |       | (2) | ---    | 0.0116 - 0.0150 | AS     |
| Pu-239  | mBq/g | 0.508 ±  | 0.029  | ---       |       |     | ---    | ---             | ---    |
| Ra-226  | pCi/g | 0.967 ±  | 0.097  | 1.99      |       | (1) | ---    | ---             | GAMMA  |
| Ra-226  | mBq/g | 35.8 ±   | 3.6    | ---       |       |     | ---    | ---             | ---    |
| Sr-90   | pCi/g | 0.14     |        | ---       |       |     | ---    | ---             | ---    |
| Sr-90   | mBq/g | 5.3      |        | ---       |       |     | ---    | ---             | ---    |
| Th-228  | pCi/g | 0.904    |        | 1.03      |       | (1) | ---    | ---             | AS     |
| Th-228  | mBq/g | 33.5     |        | ---       |       |     | ---    | ---             | ---    |
| Th-230  | pCi/g | 0.796    |        | 0.735     |       | (2) | ---    | 0.67 - 0.8      | AS     |
| Th-230  | mBq/g | 29.5     |        | ---       |       |     | ---    | ---             | ---    |
| Th-232  | pCi/g | 0.896    |        | 1.07      |       | (1) | ---    | ---             | AS     |
| Th-232  | mBq/g | 33.2     |        | ---       |       |     | ---    | ---             | ---    |
| U       | ug/g  | ---      |        | 2.43      |       | (1) | ---    | ---             | NAA    |
| U-234   | pCi/g | 0.896    |        | ---       |       |     | ---    | ---             | ---    |
| U-234   | mBq/g | 33.2     |        | ---       |       |     | ---    | ---             | ---    |
| U-235   | pCi/g | 0.046    |        | ---       |       |     | ---    | ---             | ---    |
| U-235   | mBq/g | 1.7      |        | ---       |       |     | ---    | ---             | ---    |
| U-238   | pCi/g | 0.832    |        | ---       |       |     | ---    | ---             | ---    |
| U-238   | mBq/g | 30.8     |        | ---       |       |     | ---    | ---             | ---    |

TABLE 4350B-2: INDIVIDUAL DATA FOR NBS SRM 4350B (revised 3/1/86)

| Conc                  | Uncer | Com | Method | Reference | Conc                  | Uncer  | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|-----------------------|--------|-----|--------|-----------|
| <u>Ac-228 (pCi/g)</u> |       |     |        |           | <u>Pu-238 (fCi/g)</u> |        |     |        |           |
| 1.2                   | 0.43  |     | GAMMA  | 83KIM 01  | <                     | 10     |     | RAS    | 86GAU 01  |
|                       |       |     |        |           | 0.2                   | 0.8    |     | AS     | 84GLA 02  |
| <u>Am-241 (pCi/g)</u> |       |     |        |           | <u>Pu-239 (pCi/g)</u> |        |     |        |           |
| <                     | 0.006 |     | GAMMA  | 86GAU 01  | 0.0116                | 0.0025 |     | AS     | 84GLA 02  |
| 0.005                 |       |     | AS     | 84GLA 02  | 0.015                 |        |     | RAS    | 86GAU 01  |
| <u>Co-60 (pCi/g)</u>  |       |     |        |           | <u>Ra-226 (pCi/g)</u> |        |     |        |           |
| 0.11                  | 0.03  |     | GAMMA  | 84KRI 01  | 1.99                  | 0.21   |     | GAMMA  | 84KRI 01  |
| 0.13                  | 0.01  |     | GAMMA  | 82JEN 03  |                       |        |     |        |           |
| <u>Cs-137 (pCi/g)</u> |       |     |        |           | <u>Th-228 (pCi/g)</u> |        |     |        |           |
| 0.79                  | 0.08  |     | GAMMA  | 86GAU 01  | 1.03                  | 0.03   |     | AS     | 85JOS 01  |
| 0.8                   | 0.1   |     | GAMMA  | 85GAU 04  |                       |        |     |        |           |
| 0.81                  | 0.01  |     | GAMMA  | 84KRI 01  | <u>Th-230 (pCi/g)</u> |        |     |        |           |
| 0.85                  | 0.08  |     | GAMMA  | 84GLA 02  | 0.67                  | 0.05   |     | AS     | 85JOS 01  |
| 0.96                  | 0.12  |     | GAMMA  | 84GLA 11  | 0.8                   |        |     | AS     | 84GLA 02  |
| <u>Eu-152 (pCi/g)</u> |       |     |        |           | <u>Th-232 (pCi/g)</u> |        |     |        |           |
| 1.16                  | 0.12  |     | GAMMA  | 84GLA 11  | 1.07                  | 0.06   |     | AS     | 85JOS 01  |
| <u>Eu-154 (pCi/g)</u> |       |     |        |           | <u>U (ug/g)</u>       |        |     |        |           |
| <                     | 0.3   |     | GAMMA  | 84GLA 11  | 2.43                  | 0.05   |     | DNA    | 85GAU 04  |
| <u>K-40 (pCi/g)</u>   |       |     |        |           |                       |        |     |        |           |
| 15.13                 | 0.63  |     | GAMMA  | 84KRI 01  |                       |        |     |        |           |

TABLE 4351-1: COMPILED DATA FOR NBS SRMs 4351 and 4352 ENVIRONMENTAL RADIOACTIVITY  
(Human Lung and Human Liver)

| ELEMENT    | UNITS | NBS                          |                               |
|------------|-------|------------------------------|-------------------------------|
|            |       | 4351 (lung)<br>Mean $\pm$ SD | 4352 (liver)<br>Mean $\pm$ SD |
| Am-241     | mBq/g | 0.11                         | 0.15 $\pm$ 0.06               |
| Am-241     | pCi/g | 0.003                        | 0.0040 $\pm$ 0.0015           |
| Pu-238     | mBq/g | ---                          | 0.055 $\pm$ 0.024             |
| Pu-238     | pCi/g | ---                          | 0.0015 $\pm$ 0.0006           |
| Pu-238/239 | ratio | 0.0150 $\pm$ 0.0030          | ---                           |
| Pu-239     | mBq/g | 1.1 $\pm$ 1.2                | 2.06 $\pm$ 0.39               |
| Pu-239     | pCi/g | 0.0030 $\pm$ 0.0003          | 0.0556 $\pm$ 0.0106           |
| Th-228     | mBq/g | 0.22                         | 0.51                          |
| Th-228     | pCi/g | 0.0059                       | 0.014                         |
| Th-230     | mBq/g | 0.2                          | 0.2                           |
| Th-230     | pCi/g | 0.0054                       | 0.0054                        |
| Th-232     | mBq/g | 0.21 $\pm$ 0.03              | 0.058                         |
| Th-232     | pCi/g | 0.0057 $\pm$ 0.0007          | 0.0016                        |
| U-234      | mBq/g | 0.10 $\pm$ 0.025             | 0.1                           |
| U-234      | pCi/g | 0.0027 $\pm$ 0.0007          | 0.0027                        |
| U-235      | mBq/g | ---                          | 0.009                         |
| U-235      | pCi/g | ---                          | 0.0002                        |
| U-238      | mBq/g | 0.100 $\pm$ 0.011            | 0.088                         |
| U-238      | pCi/g | 0.0027 $\pm$ 0.0003          | 0.0024                        |

TABLE 4353-1: COMPILED DATA FOR NBS SRM 4353 ENVIRONMENTAL RADIOACTIVITY - ROCKY FLATS SOIL #1 (revised 3/1/86)  
(Activity as of 15 Dec. 1980)

| ELEMENT | UNITS | NBS             |     | CONSENSUS         |        | MEDIAN          | RANGE               | METHOD MEANS |                     |
|---------|-------|-----------------|-----|-------------------|--------|-----------------|---------------------|--------------|---------------------|
|         |       | Mean            | SD  | Mean              | SD     |                 |                     | Mean         | SD                  |
| Ac-228  | mBq/g | 69.8 ± 3.6      | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Ac-228  | pCi/g | 1.88 ± 0.10     | --- | 2.48 (1)          | ---    | ---             | ---                 | 2.48         | (1) GAMMA           |
| Am-241  | mBq/g | 1.25 ± 0.09     | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Am-241  | pCi/g | 0.0338 ± 0.0025 | --- | 0.035 ± 0.008 (4) | 0.0350 | 0.024 - 0.042   | 0.039 ± 0.004 (3)   | 0.024        | (1) AS<br>(1) GAMMA |
| Am-241  | pCi/g | ---             | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Cs-137  | mBq/g | 17.6 ± 0.8      | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Cs-137  | pCi/g | 0.464 ± 0.021   | --- | 0.56 ± 0.08 (4)   | 0.52   | 0.48 - 0.67     | 0.5575 ± 0.0818 (4) | ---          | GAMMA               |
| Fe-55   | mBq/g | 2.49            | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Fe-55   | pCi/g | 0.0670          | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| K-40    | mBq/g | 723 ± 70        | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| K-40    | pCi/g | 19.5 ± 1.9      | --- | 25 (1)            | ---    | ---             | 25                  | ---          | (1) GAMMA           |
| Pu-238  | mBq/g | 0.166 ± 0.018   | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Pu-238  | pCi/g | 0.0045 ± 0.0005 | --- | 0.0038 (2)        | ---    | 0.0035 - 0.0040 | 0.0038              | ---          | (2) AS              |
| Pu-239  | mBq/g | 8.03 ± 0.60     | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Pu-239  | pCi/g | 0.217 ± 0.016   | --- | 0.214 ± 0.008 (7) | 0.212  | 0.202 - 0.221   | 0.214 ± 0.008 (7)   | ---          | AS                  |
| Ra-226  | mBq/g | 43.0 ± 2.8      | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Ra-226  | pCi/g | 1.16 ± 0.08     | --- | 1.03 (1)          | ---    | ---             | 1.03                | ---          | (1) GAMMA           |
| Sr-90   | mBq/g | 7.63 ± 0.78     | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Sr-90   | pCi/g | 0.206 ± 0.021   | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Th-228  | mBq/g | 70.8 ± 3.6      | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Th-228  | pCi/g | 1.91 ± 0.1      | --- | 1.97 (1)          | ---    | ---             | 1.97                | ---          | (1) AS              |
| Th-230  | mBq/g | 44.3 ± 2.3      | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Th-230  | pCi/g | 1.20 ± 0.06     | --- | 1.04 (2)          | ---    | 0.88 - 1.2      | 1.04                | ---          | (2) AS              |
| Th-232  | mBq/g | 69.3 ± 3.5      | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| Th-232  | pCi/g | 1.87 ± 0.10     | --- | 1.93 (1)          | ---    | ---             | 1.93                | ---          | (1) AS              |
| U       | ug/g  | ---             | --- | 3.04 (1)          | ---    | ---             | 3.04                | ---          | (1) NAA             |
| U-234   | mBq/g | 39.1 ± 1.4      | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| U-234   | pCi/g | 1.06 ± 0.04     | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| U-235   | mBq/g | 1.9             | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| U-235   | pCi/g | 0.051           | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| U-238   | mBq/g | 38.9 ± 2.0      | --- | ---               | ---    | ---             | ---                 | ---          | ---                 |
| U-238   | pCi/g | 1.05 ± 0.05     | --- | 1.45 (1)          | ---    | ---             | 1.45                | ---          | (1) GAMMA           |

TABLE 4353-2: INDIVIDUAL DATA FOR NBS SRM 4353 (revised 3/1/86)

| Conc                  | Uncer  | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|-----------------------|--------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Ac-228 (pCi/g)</u> |        |     |        |           | <u>Pu-239 (pCi/g)</u> |       |     |        |           |
| 2.48                  | 0.57   |     | GAMMA  | 83KIM 01  | 0.169                 | 0.014 | 11  | AS     | 85YAM 02  |
|                       |        |     |        |           | 0.202                 | 0.039 |     | AS     | 84GLA 02  |
| <u>Am-241 (pCi/g)</u> |        |     |        |           |                       |       |     |        |           |
|                       |        |     |        |           | 0.207                 | 0.014 | 11  | AS     | 85YAM 02  |
| 0.024                 |        |     | GAMMA  | 86GAU 01  | 0.212                 | 0.011 | 11  | AS     | 85YAM 02  |
| 0.035                 | 0.004  |     | RAS    | 85GAU 04  | 0.218                 | 0.014 | 11  | AS     | 85YAM 02  |
| 0.04                  | 0.004  |     | RAS    | 84GLA 11  | 0.22                  | 0.02  |     | RAS    | 86GAU 01  |
| 0.042                 | 0.008  |     | AS     | 84GLA 02  | 0.22                  | 0.02  |     | RAS    | 84GLA 11  |
|                       |        |     |        |           | 0.221                 | 0.017 | 11  | AS     | 85YAM 02  |
| <u>Cs-137 (pCi/g)</u> |        |     |        |           | <u>Ra-226 (pCi/g)</u> |       |     |        |           |
| 0.48                  | 0.04   |     | GAMMA  | 86GAU 01  | 1.03                  | 0.16  |     | GAMMA  | 83KIM 01  |
| 0.52                  | 0.06   |     | GAMMA  | 84GLA 02  |                       |       |     |        |           |
| 0.56                  | 0.05   |     | GAMMA  | 85GAU 04  | <u>Th-228 (pCi/g)</u> |       |     |        |           |
| 0.67                  | 0.1    |     | GAMMA  | 84GLA 11  | 1.97                  | 0.04  |     | AS     | 85JOS 01  |
| <u>K-40 (pCi/g)</u>   |        |     |        |           | <u>Th-230 (pCi/g)</u> |       |     |        |           |
| 25                    |        |     | GAMMA  | 86GAU 01  | 0.88                  | 0.05  |     | AS     | 85JOS 01  |
|                       |        |     |        |           | 1.2                   |       |     | AS     | 84GLA 02  |
| <u>Pu-238 (pCi/g)</u> |        |     |        |           | <u>Th-232 (pCi/g)</u> |       |     |        |           |
| <                     | 0.01   |     | RAS    | 86GAU 01  | 1.93                  | 0.08  |     | AS     | 85JOS 01  |
| 0.0035                | 0.0019 |     | AS     | 84GLA 02  | <u>U (ug/g)</u>       |       |     |        |           |
| 0.004                 | 0.002  |     | RAS    | 84GLA 11  | 3.04                  | 0.07  |     | DNA    | 85GAU 04  |
|                       |        |     |        |           | <u>U-238 (pCi/g)</u>  |       |     |        |           |
|                       |        |     |        |           | 1.45                  | 0.49  |     | GAMMA  | 83KIM 01  |

TABLE 4355-1: COMPILED DATA FOR NBS SRM 4355 ENVIRONMENTAL RADIOACTIVITY - PERUVIAN SOIL (revised 3/1/86)  
(Activity as of 1 June 1982)

| ELEMENT | UNITS | NBS                 |    | CONSENSUS | METHOD |
|---------|-------|---------------------|----|-----------|--------|
|         |       | Mean $\pm$          | SD | Mean (n)  |        |
| Ag      | ug/g  | 1.9                 |    | ---       | ---    |
| Al      | %     | 8.19 $\pm$ 0.28     |    | ---       | ---    |
| Am-241  | mBq/g | 0.004 $\pm$ 0.001   |    | ---       | ---    |
| Am-241  | pCi/g | 0.0001              |    | ---       | ---    |
| As      | ug/g  | 93.9 $\pm$ 7.5      |    | ---       | ---    |
| B       | ug/g  | 63                  |    | ---       | ---    |
| Ba      | ug/g  | 561 $\pm$ 53        |    | ---       | ---    |
| Be      | ug/g  | 1.77 $\pm$ 0.27     |    | ---       | ---    |
| Bi      | ug/g  | 12                  |    | ---       | ---    |
| Bi-214  | mBq/g | 40                  |    | ---       | ---    |
| Bi-214  | pCi/g | 1.2                 |    | ---       | ---    |
| Br      | ug/g  | 5.4 $\pm$ 1.0       |    | ---       | ---    |
| Ca      | %     | 2.2                 |    | ---       | ---    |
| Cd      | ug/g  | 1.5                 |    | ---       | ---    |
| Ce      | ug/g  | 59.3 $\pm$ 3.0      |    | ---       | ---    |
| Co      | ug/g  | 14.8 $\pm$ 0.76     |    | ---       | ---    |
| Co-60   | mBq/g | < 0.016             |    | ---       | ---    |
| Co-60   | pCi/g | < 0.0004            |    | ---       | ---    |
| Cr      | ug/g  | 28.9 $\pm$ 2.8      |    | ---       | ---    |
| Cs      | ug/g  | 56.7 $\pm$ 3.3      |    | ---       | ---    |
| Cs-137  | mBq/g | 0.33 $\pm$ 0.04     |    | ---       | ---    |
| Cs-137  | pCi/g | 0.0090 $\pm$ 0.0011 |    | ---       | ---    |
| Cu      | ug/g  | 77.1 $\pm$ 4.7      |    | ---       | ---    |
| Dy      | ug/g  | 4 $\pm$ 1           |    | ---       | ---    |
| Eu      | ug/g  | 1.18 $\pm$ 0.08     |    | ---       | ---    |
| Eu-152  | mBq/g | < 0.23              |    | ---       | ---    |
| Eu-152  | pCi/g | < 0.0063            |    | ---       | ---    |
| Eu-154  | mBq/g | < 0.2               |    | ---       | ---    |
| Eu-154  | pCi/g | < 0.006             |    | ---       | ---    |
| Eu-155  | mBq/g | < 0.2               |    | ---       | ---    |
| Eu-155  | pCi/g | < 0.006             |    | ---       | ---    |
| F       | ug/g  | 682                 |    | ---       | ---    |
| Fe      | %     | 4.45 $\pm$ 0.19     |    | ---       | ---    |
| Fe-55   | mBq/g | 2.0                 |    | ---       | ---    |
| Fe-55   | pCi/g | 0.05                |    | ---       | ---    |
| Ga      | ug/g  | 18.4 $\pm$ 1.6      |    | ---       | ---    |
| Gd      | ug/g  | 35                  |    | ---       | ---    |
| Hf      | ug/g  | 6.3 $\pm$ 0.3       |    | ---       | ---    |
| Hg      | ug/g  | 0.79                |    | ---       | ---    |
| Ho      | ug/g  | 0.82                |    | ---       | ---    |
| K       | %     | 1.86 $\pm$ 0.15     |    | ---       | ---    |
| K-40    | mBq/g | 585                 |    | ---       | ---    |
| K-40    | pCi/g | 16                  |    | ---       | ---    |
| La      | ug/g  | 28.1 $\pm$ 1.5      |    | ---       | ---    |
| Li      | ug/g  | 52 $\pm$ 33         |    | ---       | ---    |
| Lu      | ng/g  | 336 $\pm$ 44        |    | ---       | ---    |

TABLE 4355-1: COMPILED DATA FOR NBS SRM 4355 ENVIRONMENTAL RADIOACTIVITY - PERUVIAN SOIL (cont.)

| ELEMENT | UNITS | NBS      |          | CONSENSUS | METHOD |
|---------|-------|----------|----------|-----------|--------|
|         |       | Mean     | ± SD     | Mean (n)  |        |
| Mg      | %     | 1.5      |          | ---       | ---    |
| Mg      | ug/g  | 852      | ± 37     | ---       | ---    |
| Mo      | ug/g  | 1.7      |          | ---       | ---    |
| Na      | %     | 1.92     | ± 0.11   | ---       | ---    |
| Nb      | ug/g  | 9        |          | ---       | ---    |
| Nd      | ug/g  | 29.9     | ± 1.6    | ---       | ---    |
| Ni      | ug/g  | 13       |          | ---       | ---    |
| P       | ug/g  | 1100     |          | ---       | ---    |
| Pb      | ug/g  | 129      | ± 26     | ---       | ---    |
| Pr      | ug/g  | 5        |          | ---       | ---    |
| Pu-238  | mBq/g | 0.003    |          | ---       | ---    |
| Pu-238  | pCi/g | < 0.0001 |          | ---       | ---    |
| Pu-239  | mBq/g | 0.0076   | ± 0.0021 | ---       | ---    |
| Pu-239  | pCi/g | 0.0002   | ± 0.0001 | ---       | ---    |
| Rb      | ug/g  | 138      | ± 7.4    | ---       | ---    |
| Sb      | ug/g  | 14.3     | ± 2.2    | ---       | ---    |
| Sb-125  | mBq/g | < 0.14   |          | ---       | ---    |
| Sb-125  | pCi/g | < 0.0038 |          | ---       | ---    |
| Sc      | ug/g  | 14.8     | ± 0.66   | ---       | ---    |
| Se      | ug/g  | 1.4      |          | ---       | ---    |
| Si      | %     | 33       |          | ---       | ---    |
| Sm      | ug/g  | 5.42     | ± 0.39   | ---       | ---    |
| Sr      | ug/g  | 330      |          | ---       | ---    |
| Sr-90   | mBq/g | 0.22     |          | ---       | ---    |
| Sr-90   | pCi/g | 0.006    |          | ---       | ---    |
| Ta      | ng/g  | 764      | ± 56     | ---       | ---    |
| Tb      | ng/g  | 665      | ± 75     | ---       | ---    |
| Th      | ug/g  | 11.3     | ± 0.73   | ---       | ---    |
| Th-228  | mBq/g | 42.2     | ± 2.1    | ---       | ---    |
| Th-228  | pCi/g | 1.15     | ± 0.06   | 1.17 (1)  | AS     |
| Th-230  | mBq/g | 39.7     | ± 2      | ---       | ---    |
| Th-230  | pCi/g | 1.08     | ± 0.06   | 0.99 (1)  | AS     |
| Th-232  | pCi/g | 1.17     | ± 0.06   | 1.21 (1)  | AS     |
| Ti      | ug/g  | 4700     |          | ---       | ---    |
| Tl-208  | mBq/g | 12       |          | ---       | ---    |
| Tl-208  | pCi/g | 0.33     |          | ---       | ---    |
| Tm      | ng/g  | 420      |          | ---       | ---    |
| U       | ug/g  | 3.04     | ± 0.51   | 2.82 (2)  | NAA    |
| V       | ug/g  | 151      |          | ---       | ---    |
| W       | ug/g  | 5.1      |          | ---       | ---    |
| Y       | ug/g  | 21       |          | ---       | ---    |
| Yb      | ug/g  | 2.24     | ± 0.2    | ---       | ---    |
| Zn      | ug/g  | 368      | ± 8.2    | ---       | ---    |
| Zr      | ug/g  | 221      |          | ---       | ---    |

TABLE 4355-2: INDIVIDUAL DATA FOR NBS SRM 4355 (revised 3/1/86)

| Conc                  | Uncer | Com | Method | Reference | Conc                  | Uncer | Com | Method | Reference |
|-----------------------|-------|-----|--------|-----------|-----------------------|-------|-----|--------|-----------|
| <u>Th-228 (pCi/g)</u> |       |     |        |           | <u>Th-232 (pCi/g)</u> |       |     |        |           |
| 1.17                  | 0.03  |     | AS     | 85JOS 01  | 1.21                  | 0.06  |     | AS     | 85JOS 01  |
| <u>Th-230 (pCi/g)</u> |       |     |        |           | <u>U (ug/g)</u>       |       |     |        |           |
| 0.99                  | 0.05  |     | AS     | 85JOS 01  | 2.75                  | 0.09  |     | DNA    | 85GAU 04  |
|                       |       |     |        |           | 2.88                  | 0.05  |     | DNA    | 85GLA 04  |

TABLE 8412-1: COMPILED DATA FOR NBS RMs 8412 and 8413 CORN STALK AND KERNEL (revised 3/1/87)

| ELEMENT | UNITS | NBS           |               |
|---------|-------|---------------|---------------|
|         |       | 8412          | 8413          |
|         |       | Mean ± SD     | Mean ± SD     |
| Al      | ug/g  | ---           | 4 ± 2         |
| Ca      | ug/g  | 2160 ± 80     | 42 ± 5        |
| Cl      | ug/g  | 2440 ± 140    | 450 ± 120     |
| Cu      | ug/g  | 8 ± 1         | 3.0 ± 0.6     |
| F       | ng/g  | 650 ± 130     | 240 ± 20      |
| Fe      | ug/g  | 139 ± 15      | 23 ± 5        |
| K       | %     | 1.735 ± 0.047 | 3570 ± 370    |
| Mg      | ug/g  | 1600 ± 70     | 990 ± 82      |
| Mn      | ug/g  | 15 ± 2        | 4.0 ± 0.3     |
| N       | %     | 0.697 ± 0.032 | 1.375 ± 0.043 |
| Na      | ug/g  | 28 ± 8        | ---           |
| Se      | ng/g  | 16 ± 8        | 4 ± 2         |
| Sr      | ug/g  | 12 ± 2        | ---           |
| Zn      | ug/g  | 32 ± 3        | 15.7 ± 1.4    |

TABLE 8030-1: COMPILED DATA FOR NBS RM 8030 TRACE ELEMENTS IN AN AQUATIC PLANT LAGAROSIPHON MAJOR (revised 8/1/87)  
Community Bureau of Reference BCR No. 60

| Element | Units | NBS  |        |
|---------|-------|------|--------|
|         |       | Mean | SD     |
| Ag      | ng/g  | 200  |        |
| Al      | ug/g  | 6140 |        |
| As      | ug/g  | 8    |        |
| Au      | ng/g  | 20   |        |
| B       | ug/g  | 25   |        |
| Br      | ug/g  | 20   |        |
| Ca      | %     | 3.10 |        |
| Cd      | ug/g  | 2.20 | ± 0.10 |
| Ce      | ug/g  | 4    |        |
| Cl      | %     | 1.0  |        |
| Co      | ug/g  | 4    |        |
| Cr      | ug/g  | 26   |        |
| Cs      | ng/g  | 400  |        |
| Cu      | ug/g  | 51.2 | ± 1.9  |
| Eu      | ng/g  | 170  |        |
| F       | ug/g  | 24   |        |
| Fe      | ug/g  | 2380 |        |
| Hg      | ng/g  | 340  | ± 40   |
| K       | %     | 1.14 |        |
| La      | ug/g  | 2    |        |
| Mg      | ug/g  | 6030 |        |
| Mn      | ug/g  | 1759 | ± 51   |
| Mo      | ug/g  | 2    |        |
| N       | %     | 4.12 |        |
| Na      | ug/g  | 6700 |        |
| Ni      | ug/g  | 40   |        |
| P       | ug/g  | 5140 |        |
| Pb      | ug/g  | 63.8 | ± 3.2  |
| Rb      | ug/g  | 23   |        |
| S       | ug/g  | 5200 |        |
| Sb      | ng/g  | 400  |        |
| Sc      | ng/g  | 500  |        |
| Se      | ng/g  | 700  |        |
| Si      | %     | 2.85 |        |
| Sn      | ug/g  | 6    |        |
| Ta      | ng/g  | 100  |        |
| Tb      | ng/g  | 100  |        |
| Ti      | ug/g  | 240  |        |
| Tl      | ng/g  | 240  |        |
| U       | ng/g  | 300  |        |
| V       | ug/g  | 6    |        |
| W       | ug/g  | 20   |        |
| Zn      | ug/g  | 313  | ± 8    |

TABLE 8031-1: COMPILED DATA FOR NBS RM 8031 TRACE ELEMENTS IN AN AQUATIC MOSS PLATIHYPNIDIUM RIPARIOIDES  
(revised 8/1/87)

Community Bureau of Reference BCR No. 61

| Element | Units | NBS  |        |
|---------|-------|------|--------|
|         |       | Mean | ± SD   |
| Ag      | ug/g  | 2    |        |
| Al      | %     | 1.71 |        |
| As      | ug/g  | 7    |        |
| Au      | ng/g  | 220  |        |
| B       | ug/g  | 77   |        |
| Br      | ug/g  | 22   |        |
| Ca      | %     | 1.70 |        |
| Cd      | ug/g  | 1.07 | ± 0.08 |
| Ce      | ug/g  | 12   |        |
| Cl      | ug/g  | 2300 |        |
| Co      | ug/g  | 43   |        |
| Cr      | ug/g  | 532  |        |
| Cs      | ng/g  | 600  |        |
| Cu      | ug/g  | 720  | ± 31   |
| Eu      | ng/g  | 200  |        |
| F       | ug/g  | 60   |        |
| Fe      | %     | 0.93 |        |
| Hg      | ng/g  | 230  | ± 20   |
| K       | %     | 1.24 |        |
| La      | ug/g  | 5    |        |
| Mg      | ug/g  | 3900 |        |
| Mn      | ug/g  | 3771 | ± 78   |
| Mo      | ug/g  | 11   |        |
| N       | %     | 3.35 |        |
| Na      | ug/g  | 3000 |        |
| Ni      | ug/g  | 420  |        |
| P       | %     | 0.92 |        |
| Pb      | ug/g  | 64.4 | ± 3.5  |
| Rb      | ug/g  | 32   |        |
| S       | ug/g  | 2300 |        |
| Sb      | ug/g  | 1    |        |
| Sc      | ug/g  | 1    |        |
| Se      | ug/g  | 1    |        |
| Si      | %     | 7.52 |        |
| Sn      | ug/g  | 13   |        |
| Ta      | ng/g  | 500  |        |
| Tb      | ng/g  | 200  |        |
| Ti      | ug/g  | 780  |        |
| Tl      | ng/g  | 130  |        |
| U       | ng/g  | 260  |        |
| V       | ug/g  | 6    |        |
| W       | ug/g  | 239  |        |
| Zn      | ug/g  | 566  | ± 13   |

TABLE 8032-1: COMPILED DATA FOR NBS RM 8032 TRACE ELEMENTS IN A CALCAREOUS LOAM SOIL (revised 8/1/87)  
 Community Bureau of Reference BCR No. 141

| Element | Units | NBS   |       |
|---------|-------|-------|-------|
|         |       | Mean  | ± SD  |
| Al      | %     | 5.59  |       |
| As      | ug/g  | 8     |       |
| Ba      | ug/g  | 243   |       |
| Br      | ug/g  | 3.5   |       |
| Ca      | %     | 12.86 |       |
| Cd      | ng/g  | 360   | ± 100 |
| Ce      | ug/g  | 81    |       |
| Cu      | ug/g  | 32.6  | ± 1.4 |
| Eu      | ug/g  | 0.9   |       |
| Fe      | %     | 2.61  |       |
| Ga      | ug/g  | 14    |       |
| Hf      | ug/g  | 3.7   |       |
| Hg      | ng/g  | 56.8  | ± 4.3 |
| K       | %     | 1.29  |       |
| La      | ug/g  | 27    |       |
| LOI     | %     | 20.65 |       |
| Mg      | ug/g  | 7180  |       |
| Na      | ug/g  | 3200  |       |
| Nb      | ug/g  | 10    |       |
| P       | ug/g  | 700   |       |
| Pb      | ug/g  | 29.4  | ± 2.6 |
| Rb      | ug/g  | 95    |       |
| Sb      | ng/g  | 600   |       |
| Sc      | ug/g  | 8.4   |       |
| Si      | %     | 19.88 |       |
| Sm      | ug/g  | 6.3   |       |
| Sn      | ug/g  | 4.0   |       |
| Sr      | ng/g  | 460   |       |
| Th      | ug/g  | 10.3  |       |
| Ti      | ug/g  | 2800  |       |
| W       | ug/g  | 1.4   |       |
| Y       | ug/g  | 24    |       |
| Yb      | ug/g  | 2.1   |       |
| Zn      | ug/g  | 81.3  | ± 3.7 |
| Zr      | ug/g  | 120   |       |

TABLE 8033-1: COMPILED DATA FOR NBS RM 8033 TRACE ELEMENTS IN A LIGHT SANDY SOIL (revised 8/1/87)  
Community Bureau of Reference BCR No. 142

| Element | Units | NBS        |    |
|---------|-------|------------|----|
|         |       | Mean       | SD |
| Al      | %     | 5.01       |    |
| As      | ug/g  | 16         |    |
| Ba      | ug/g  | 450        |    |
| Br      | ug/g  | 6          |    |
| Ca      | %     | 3.53       |    |
| Cd      | ng/g  | 250 ± 90   |    |
| Ce      | ug/g  | 80         |    |
| Cu      | ug/g  | 27.5 ± 0.6 |    |
| Dy      | ug/g  | 5.15       |    |
| Er      | ug/g  | 2.84       |    |
| Eu      | ug/g  | 1.0        |    |
| Fe      | %     | 1.96       |    |
| Ga      | ug/g  | 11         |    |
| Gd      | ug/g  | 5.7        |    |
| Hf      | ug/g  | 12         |    |
| Hg      | ng/g  | 104 ± 12.3 |    |
| K       | %     | 2.00       |    |
| La      | ug/g  | 32         |    |
| Lu      | ng/g  | 410        |    |
| Mg      | ug/g  | 6570       |    |
| Na      | ug/g  | 7200       |    |
| Nb      | ug/g  | 14         |    |
| Nd      | ug/g  | 28         |    |
| Ni      | ug/g  | 29.2 ± 2.5 |    |
| P       | ug/g  | 960        |    |
| Pb      | ug/g  | 37.8 ± 1.9 |    |
| Rb      | ug/g  | 105        |    |
| Sb      | ug/g  | 2.5        |    |
| Sc      | ug/g  | 8.2        |    |
| Si      | %     | 31.86      |    |
| Sm      | ug/g  | 6.8        |    |
| Sn      | ug/g  | 4          |    |
| Sr      | ug/g  | 164        |    |
| Th      | ug/g  | 11.9       |    |
| Ti      | ug/g  | 3700       |    |
| W       | ug/g  | 1.2        |    |
| Y       | ug/g  | 30.4       |    |
| Yb      | ug/g  | 2.77       |    |
| Zn      | ug/g  | 92.4 ± 4.4 |    |
| Zr      | ug/g  | 390        |    |

TABLE 8034-1: COMPILED DATA FOR NBS RM 8034 TRACE ELEMENTS IN A SEWAGE SLUDGE (revised 8/1/87)  
 Community Bureau of Reference BCR No. 144

| Element | Units | NBS             |
|---------|-------|-----------------|
|         |       | Mean $\pm$ SD   |
| Ag      | ug/g  | 13              |
| Al      | %     | 2.42            |
| As      | ug/g  | 6.7             |
| Au      | ug/g  | 1               |
| B       | ug/g  | 61              |
| Be      | ng/g  | 660             |
| Bi      | ug/g  | 16              |
| Br      | ug/g  | 9               |
| Ca      | %     | 4.06            |
| Cd      | ug/g  | 3.41 $\pm$ 0.25 |
| Ce      | ug/g  | 14              |
| Co      | ug/g  | 9.06 $\pm$ 0.60 |
| Cu      | ug/g  | 713 $\pm$ 26    |
| Fe      | %     | 4.43            |
| Ga      | ug/g  | 5               |
| Hg      | ug/g  | 1.49 $\pm$ 0.22 |
| K       | ug/g  | 6500            |
| Mg      | ug/g  | 5500            |
| Mn      | ug/g  | 449 $\pm$ 13    |
| Mo      | ug/g  | 4               |
| Na      | ug/g  | 3400            |
| Nb      | ug/g  | 3               |
| Ni      | ug/g  | 942 $\pm$ 22    |
| P       | %     | 2.21            |
| Pb      | ug/g  | 495 $\pm$ 19    |
| Rb      | ug/g  | 14              |
| Sc      | ug/g  | 1.5             |
| Si      | %     | 6.37            |
| Sn      | ug/g  | 98              |
| Ti      | ug/g  | 1140            |
| Tl      | ng/g  | 490             |
| V       | ug/g  | 14              |
| W       | ug/g  | 7               |
| Y       | ug/g  | 5               |
| Zn      | ug/g  | 3143 $\pm$ 103  |
| Zr      | ug/g  | 56              |

TABLE 8035-1: COMPILED DATA FOR NBS RM 8035 TRACE ELEMENTS IN A SEWAGE SLUDGE OF MAINLY INDUSTRIAL ORIGIN  
(revised 8/1/87)

Community Bureau of Reference BCR No. 146

| Element | Units | NBS<br>Mean $\pm$ SD |
|---------|-------|----------------------|
| Ag      | ug/g  | 203                  |
| Al      | %     | 4.76                 |
| As      | ug/g  | 5.1                  |
| Au      | ug/g  | 3.6                  |
| B       | ug/g  | 50                   |
| Be      | ug/g  | 5.4                  |
| Br      | ug/g  | 6                    |
| Ca      | %     | 10.2                 |
| Cd      | ug/g  | 77.7 $\pm$ 2.6       |
| Ce      | ug/g  | 100                  |
| Co      | ug/g  | 11.8 $\pm$ 0.7       |
| Cu      | ug/g  | 934 $\pm$ 24         |
| Fe      | %     | 1.85                 |
| Ga      | ug/g  | 6                    |
| Hg      | ug/g  | 9.49 $\pm$ 0.76      |
| K       | ug/g  | 4800                 |
| La      | ug/g  | 14                   |
| LOI     | %     | 37.7                 |
| Mg      | %     | 2.0                  |
| Mn      | ug/g  | 588 $\pm$ 24         |
| Mo      | ug/g  | 10                   |
| Na      | ug/g  | 2200                 |
| Nb      | ug/g  | 15                   |
| Ni      | ug/g  | 280 $\pm$ 18         |
| P       | %     | 2.57                 |
| Pb      | ug/g  | 1270 $\pm$ 28        |
| Rb      | ug/g  | 27                   |
| Sc      | ug/g  | 2.4                  |
| Si      | %     | 10.6                 |
| Ti      | %     | 1.74                 |
| Tl      | ug/g  | 1.2                  |
| V       | ug/g  | 35                   |
| W       | ug/g  | 6                    |
| Zn      | ug/g  | 4059 $\pm$ 90        |
| Zr      | ug/g  | 9                    |

TABLE 8036-1: COMPILED DATA FOR NBS RM 8036 TRACE ELEMENTS IN A SPIKED SKIM MILK POWDER (revised 8/1/87)  
 Community Bureau of Reference BCR No. 150

| Element | Units | NBS  |        |
|---------|-------|------|--------|
|         |       | Mean | SD     |
| Cd      | ng/g  | 21.8 | ± 1.4  |
| Co      | ng/g  | 6.4  |        |
| Cu      | ug/g  | 2.23 | ± 0.08 |
| Fe      | ug/g  | 11.8 | ± 0.6  |
| Hg      | ng/g  | 9.4  | ± 1.7  |
| I       | ug/g  | 1.29 | ± 0.09 |
| Mn      | ng/g  | 236  |        |
| Ni      | ng/g  | 61.5 |        |
| Pb      | ug/g  | 1.00 | ± 0.04 |
| Se      | ng/g  | 127  |        |
| Tl      | ng/g  | 1.0  |        |
| Zn      | ug/g  | 49.4 |        |

TABLE 8431-1: COMPILED DATA FOR NBS RM 8431 MIXED DIET (revised 3/1/87)

| ELEMENT     | UNITS     | NBS             |
|-------------|-----------|-----------------|
|             |           | Mean $\pm$ SD   |
| Al          | ug/g      | 4.39 $\pm$ 1.07 |
| As          | ug/g      | 0.92 $\pm$ 0.34 |
| Ca          | ug/g      | 1940 $\pm$ 140  |
| Cd          | ng/g      | 42 $\pm$ 11     |
| Co          | ng/g      | 38 $\pm$ 8      |
| Cr          | ng/g      | 102 $\pm$ 6     |
| Cu          | ug/g      | 3.36 $\pm$ 0.33 |
| Fe          | ug/g      | 37.0 $\pm$ 2.6  |
| K           | ug/g      | 7900 $\pm$ 4200 |
| Mg          | ug/g      | 650 $\pm$ 40    |
| Mn          | ug/g      | 8.12 $\pm$ 0.31 |
| Mo          | ng/g      | 288 $\pm$ 29    |
| Na          | ug/g      | 3120 $\pm$ 160  |
| Ni          | ng/g      | 644 $\pm$ 151   |
| P           | ug/g      | 3320 $\pm$ 310  |
| Se          | ng/g      | 242 $\pm$ 30    |
| Zn          | ug/g      | 17.0 $\pm$ 0.6  |
| ASH         | %         | 3.00 $\pm$ 0.09 |
| Calorie     | Cal/100 g | 436             |
| Fat         | %         | 9.5 $\pm$ 0.92  |
| Fructose    | %         | 5.8             |
| Glucose     | %         | 6.5             |
| Lactose     | %         | 3.7             |
| Maltose     | %         | 1.8             |
| Phytate     | mg/g      | 2.10            |
| Protein     | %         | 19.1 $\pm$ 0.6  |
| Starch      | %         | 24.6 $\pm$ 5.0  |
| Sucrose     | %         | 11.1            |
| Total Sugar | %         | 28.3 $\pm$ 1.7  |
| Total Fiber | %         | 5.3             |

# Appendix

## References for NBS SRM Collected Data

| CODE N   | REFERENCE  | CODE N   | REFERENCE  |
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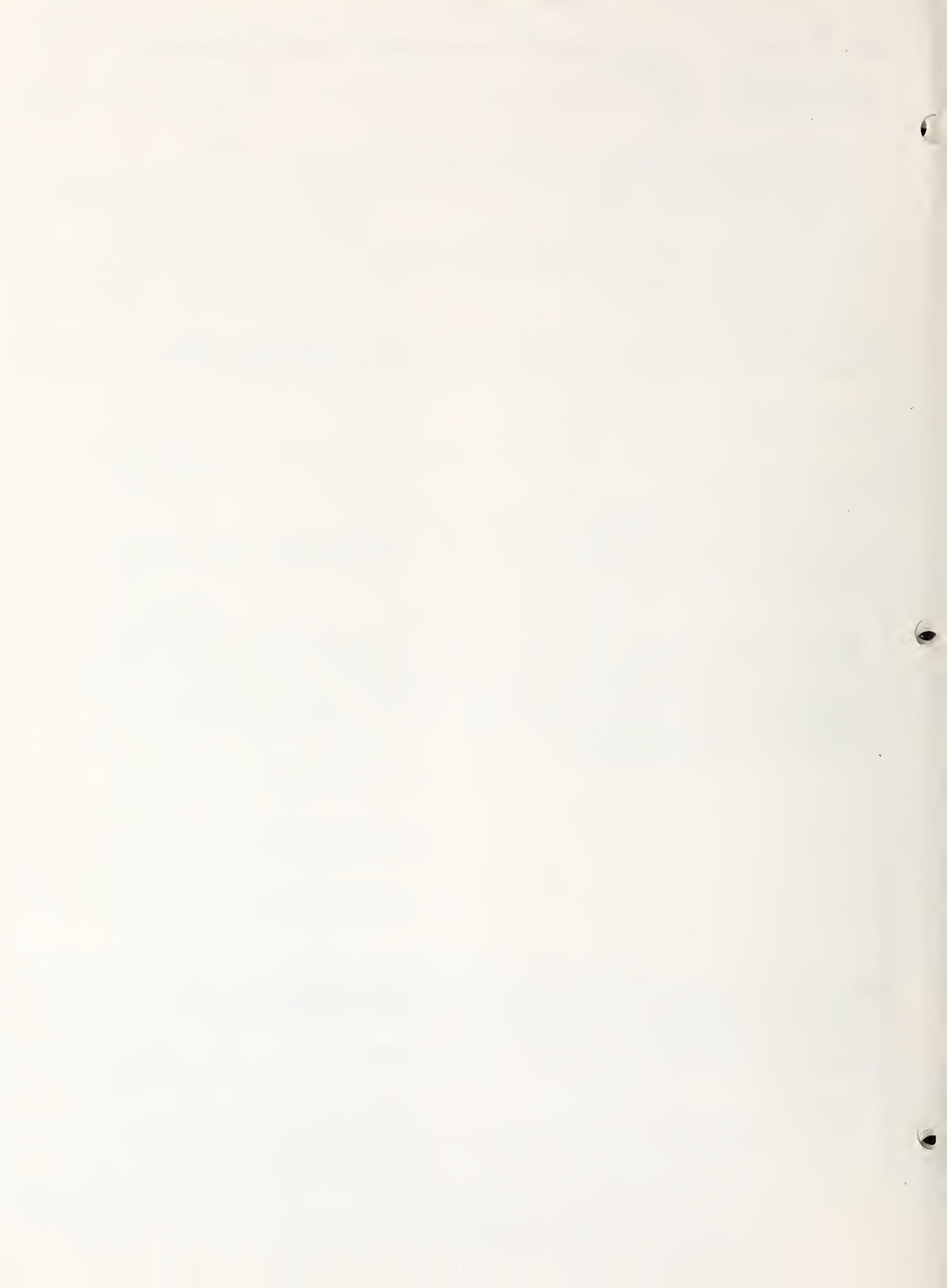
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